A Clinical Lecture

ON

THE SURGICAL TREATMENT OF RELAPSING APPENDICITIS, WITH A REPORT OF THREE SUCCESSFUL CASES.

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GENTLEMEN,—Inflammation of the vermiform appendix, or, as it was formerly termed, perityphlitis, is a disease from which in the majority of cases a patient suffers once, and once only, in a lifetime. He has an attack—severe or mild as the case may be—and if, under proper medical care and treatment, he is restored to health his appendix in the majority of cases gives no further trouble. But in a certain number of cases, the sequence of events is not so happy. After an interval, it may be of months or of years, a relapse occurs, and this is followed at longer or shorter intervals by a number of other ones varying much in severity. These may be so frequent and so severe as to render the patient a confirmed invalid even if he does not actually die in one of them. Relapses are, I fancy, more frequent than is generally deemed to be the case. Hospital patients, from whom most of our statistics on such subjects are derived are a very wandering population, especially in our big cities, and for this reason it is very difficult to obtain an accurate knowledge of the after history of our patients or to determine the actual percentage of relapses after apparent cures. Hawkins[1] from an analysis of 250 cases admitted into the wards of St. Thomas's Hospital found that in 23·6 per cent. there was a history of one or more previous attacks. These figures show that the percentage of relapses after apparent cure of appendicitis is certainly as high as 23·6 per cent.; and inasmuch as amongst these 250 cases are included cases which, though suffering on admission from a first attack, may possibly, after apparent recovery and discharge from hospital, have had other attacks, the percentage of relapses is probably considerably higher. In almost all these relapsing cases it is the appendix itself which is the starting-point of the recurrent attacks of inflammation. In one or two exceptional cases only have they been traced to ulceration in the cæcum itself. The principal morbid conditions which are found may be grouped under six heads: (1) an enterolith is imprisoned in the appendix (as in Case 1) with occasional distension of its blind end with pus; (2) the appendix is surrounded by dense, inflammatory adhesions enclosing an encapsuled abscess; (3) the lumen of the appendix is destroyed by ulceration and its distal end is distended with mucus or pus; (4) the appendix is coiled upon itself or acutely "kinked" and fixed in this position by adhesions; (5) the appendix is free but much thickened, resembling a mass of cartilage rather than a mucous tube (such an appendix is occasionally lengthened and unequally distended along its length); and (6) the appendix is surrounded by dense old adhesions, matting it to the cæcum, small intestine, bladder, rectum, or the abdominal wall.

In some cases these relapses seem to become milder, in others more severe as time goes on; but a severe or even fatal relapse may follow a succession of very mild ones, and we cannot predict with any certainty the character of future relapses from that of the previous ones. For this reason the principle of treatment by removal of the offending organ during a quiescent period, which has been so ably advocated, and so successfully carried out, by Mr. Treves in this country, cannot be too strongly insisted upon. But I would go still further and make it a rule to strongly advise operation in all cases where there has been a single relapse after the primary attack. Careful dieting and medicine with prolonged rest in bed may in a few of such relapsing cases effect a lasting cure, but this is the exception, and in the majority of cases relapse follows relapse, producing in some cases a chronic state of invalidism, while each relapse adds to the difficulties and dangers of any operation which may ultimately have to be performed. In my own experience during the last few years I know of five cases in which a sudden fatal general peritonitis has followed the repeated warnings given by a succession of mild relapses and in which, had this treatment been adopted and the removal of the diseased appendix been effected after one of the earlier mild attacks, these lives would in all probability have been saved.

The operation itself is often extremely simple; in the first two of my own cases it was so; but it may, on the other hand, be one of extreme difficulty. I have more than once assisted at cases where, owing to the dense and extensive adhesions, and the intimate adhesion of omentum, intestine, and cæcum, it has been found quite impossible even to expose the appendix, and the attempt has had to be abandoned. The mortality, however, attending it in skilled hands is extremely small (Mr. Treves has published a brilliant record of 150 cases with only one death). The repeated attacks of inflammation have fortunately rendered the peritoneum both less vulnerable to injury and less absorbent of poison; and for this reason an amount of tearing and bruising which, with a normal peritoneum would almost certainly set up the most intense inflammation is frequently followed by little or no disturbance. Wherever possible the stump of the appendix left after removal should be provided with a serous covering. With this object in my two first cases I raised a circular flap of peritoneum only from the appendix, commencing some half an inch beyond the point at which it was intended to excise it. The muscular and mucous coated were then ligatured with silk, cut through, and the stump touched with pure carbolic acid. The flap of serous membrane was finally stitched over the stump so as to completely cover it in. It was impossible to do this in Case 3, and I am disposed to attribute the localised suppuration which occurred to an infection of the wound from the exposed mucous membrane. No drainage of the peritoneum is necessary in uncomplicated cases. It should be avoided if possible, as the liability to a subsequent yielding of the scar and formation of a ventral hernia is thus considerably lessened. The rapid gain in weight and flesh and the quick restoration to robust health after the operation is one of its most remarkable features.

CASE 1. *Relapsing appendicitis; removal of appendix after the fourth attack; recovery.*—The patient, a man aged nineteen years, came under my care at the General Hospital on March 19th, 1896, with slight tenderness in the right iliac fossa. His first attack—the most severe one—was five years previously, the second three years, the third six months, and the fourth, whilst at the Jaffray Hospital, one month previously to his coming under my care. The attacks usually lasted about a week or ten days, and were accompanied by some pain and tenderness in the abdomen and a slight rise of temperature. He had never been sick during an attack. The last one was brought on by eating an apple. His condition on admission was as follows. He had no pain, but there was some slight tenderness in the right iliac fossa. On palpation a well-defined mass could be felt about the size of a walnut. It was situated two inches from the right anterior superior iliac spine, along a line drawn from that point to the umbilicus. Operation was performed on March 14th. The abdomen was opened by a linear incision over MacBurney's point. The appendix was found to be surrounded by matted omentum. This was separated and removed. The appendix, which was bound down and twisted on itself, was then separated from its adhesions and its mesentery was ligatured and cut through. A circular flap of serous coat only was raised for about half an inch near its junction with the cæcum. This was turned back, a silk ligature was tied tightly round the muscular and mucous coats, and the appendix cut away. The stump was touched with pure carbolic acid and the serous flap was then stitched over it with a continuous catgut suture. A small drain of iodoform gauze was left in the abdominal wound for twenty-four hours. The wound united by primary union save where the drain had been. His temperature did not reach 99°F. Some three weeks after the operation he had for about ten days some pain and frequency of micturition and a slight elevation of temperature, which with rest and low diet passed off. He

[1] Hawkins: Diseases of the Appendix, p. 112.

was discharged well on May 4th. When seen in December, 1896, he had some tendency to a small ventral hernia at the seat of the scar, and was ordered an abdominal belt. He had no more pain or abdominal trouble. With regard to the condition of the appendix, it was enlarged and thickened throughout its whole length. In its middle third it was distended into a tense sac, which on opening contained a little muco-purulent fluid and a hard oval-shaped enterolith. The coats of the appendix on section showed evidence of chronic inflammation, which was most marked in that part of the tube where the enterolith lay impacted.

CASE 2. *Relapsing appendicitis; removal of appendix after the seventh attack; complete recovery.*—A lady, aged twenty-eight years, was seen in consultation with Mr. Turner. She had had seven attacks, varying in severity, during the past four years. The present one began seven weeks previously with vomiting and pyrexia. She had been an invalid in bed ever since with occasional pyrexial attacks and exacerbations of pain in the right iliac fossa. The tumour could be plainly felt in the position of the appendix and was tender on palpation. She had lost flesh considerably. Operation was performed on Oct. 16th, 1896. The abdomen was opened by an oblique incision (as for a right inguinal colotomy). The appendix was found to be elongated and much thickened. There were no adhesions around. A circular flap of peritoneum was raised from it about half an inch from its junction with the cæcum. The muscular and mucous coats were ligatured with silk and the organ was removed after its mesentery had been ligatured with several interlacing silk ligatures. The stump of the appendix was touched with pure carbolic acid and the serous coat stitched over it with a continuous suture of fine catgut. The abdomen was closed. Primary union of the wound ensued. The patient has lost all her pains and has been perfectly well since.

The following microscopic report by Dr. Stanley relates to the condition of the appendix. Section through the appendix showed considerable thickening of, and deposit of fibrous tissue in, the peritoneal surface, with formation of new vessels. The muscular coats were also thickened and there was increase of the interstitial fibrous tissue. The mucous coat showed a form of degeneration of the epithelium and sub-epithelial cells into a series of cells having an epithelioid character and forming a fairly thick layer. In this layer the Lieberkühn follicles and solitary glands were embedded. This cellular layer was covered by cylindrical epithelium which was somewhat retrograde in type, being less well-defined than normal and the cells being irregularly shaped.

CASE 3. *Relapsing appendicitis; removal of the appendix after the seventh attack; recovery.*—The patient was a thin, delicate-looking boy, aged six and a half years. He was admitted into the Children's Hospital on Nov. 26th, 1896, suffering from appendicitis. With regard to the history, he had had six previous attacks similar to the present one, but increasing in severity, during about thirteen months. This attack began fourteen days before admission with sudden severe pain in the right groin with acute tenderness and fever. Until these attacks commenced he was strong and healthy; he had been gradually getting thin and weak since. On admission to hospital he lay with his right thigh flexed on the abdomen and complained of much pain in the right iliac fossa. There was a hard, oval, tender swelling to be felt about two inches below, and to the right of, the umbilicus. The bowels were constipated, and the tongue was dry and furred. Under rest in bed the tenderness became less, and though he vomited occasionally he improved somewhat in general health. The swelling became slightly smaller. An operation was performed on Dec. 8th. The abdomen was opened in the right iliac fossa just external to the mass. The intestine was found adherent to the abdominal wall. The appendix was coiled upon itself and distended into a hard spherical lump. This was with difficulty separated from the parietal peritoneum and omentum. It was ligatured with silk at its junction with the cæcum and excised. The stump was touched with pure carbolic acid. The abdominal wound was closed. His temperature remained normal after the operation, but his pulse continued somewhat high, varying from 100 to 120, and he vomited slightly on two occasions. On the third day the wound was dressed, and on inserting a small probe about half an ounce of fæcal-smelling pus escaped. A small drainage-tube was put in. By Dec. 14th all discharge had ceased, the tube was removed, and all stitches were taken out. On the 20th the wound was soundly closed and the patient was beginning to increase in weight. He remained an in-patient until Jan. 20th, 1897, when he was discharged, having quite regained his old weight and colour, and his bowels acting well daily. With regard to the appendix, it was distended in its middle third into a sac, which contained a hard fæcal concretion firmly wedged in it. The distal portion of the appendix was contracted and acutely twisted back upon, and adherent to, the dilated portion. The whole organ was adherent to the coats of the small intestine and the abdominal parietes.

ILLUSTRATIVE CASES OF APHASIA.

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(*Continued from p. 1143.*)

CASE 11. *Sudden cerebral attack after confinement; absolute deafness to all sounds for sixteen days; temporary motor aphasia and word-blindness; absolute word-deafness for four weeks; rapid recovery from the motor aphasia; partial recovery from the word-blindness; very slow and imperfect recovery from the word-deafness; slight paraphasia and slight paragraphia; echo speech; retention of the power of writing from dictation and of reading aloud; no hemianopsia; re-development of acute cerebral symptoms (meningitis or cerebritis) six months after the original attack; hyperpyrexia; death; no necropsy.*—This case, which is the most striking example of word-deafness without total aphasia which has come under my own notice, presents many points of interest and importance. It is very unfortunate that there was no post-mortem examination; but there can be little or no doubt that the lesion was entirely, or almost entirely, confined to the auditory speech centre or the afferent tracts going to the auditory speech centre. A profound, sudden, destructive lesion such as it must have been, involving the auditory speech-centre, would necessarily entail at its commencement considerable disturbance in the motor vocal speech centre and in the visual speech centre. That these centres (motor vocal speech centre and visual speech centre) were not themselves directly implicated by the lesion is, I think, conclusively proved by the rapid recovery in the power of motor vocal speech and the very marked recovery in the power of reading which were established. When the patient came under my notice the word-deafness was still very complete; but with the exception of some degree of paraphasia the patient could express herself quite well in spoken speech, the only defect being that she occasionally made use of a wrong word and forgot names of objects (slight paraphasia). She could read aloud anything which was placed before her. She could understand short, written sentences which she could not understand when spoken (by the ear). She could express herself in writing, though not without mistakes. The inability to understand complicated sentences and the mistakes in writing which her letters show that she made can be quite well accounted for by the lesion in the auditory speech centre; they do not necessitate a lesion in the visual speech centre. The patient could repeat correctly words and sentences which she did not understand when spoken, and could write from dictation long sentences which she was quite unable to understand by the ear. It is very difficult to explain the fact that the ability to repeat spoken speech (heard by the ear) was retained, considering that the word-deafness was so marked. The most likely supposition seems to be that the repeated (mere echo) speech passed through the right auditory speech centre (instead of through the left auditory speech centre, the usual channel) to Broca's centre in the left hemisphere. Another point of great interest in the case is that for three or four days after the seizure (although the sensorium seems to have been clear) the patient was stone deaf. Absolute deafness is very rarely indeed, as Dr. Hughlings Jackson has pointed out, the result of a cortical lesion. The fact that this patient was stone deaf is suggestive of a bilateral lesion involving both auditory centres, or the fibres passing to both auditory centres. The supposition that the lesion was bilateral (involved both auditory

centres) is perhaps supported by the history of numbness and loss of power in the left hand which ushered in the attack. The patient, it must be remembered, was right-handed, and the chief lesion was almost certainly, therefore, situated in the left auditory speech centre. In the absence of a post-mortem examination it is useless to theorise further on the point. But, so far as I know, it has never been shown that a unilateral lesion involving only *one* centre for hearing in the cerebral cortex can or does produce stone deafness. When the patient came under my notice the power of hearing ordinary sounds was perfectly regained, but the power of understanding spoken language was still very imperfect. The remark which the patient herself volunteered ("Is it not a strange thing that I can hear the clock ticking and cannot hear you speak? Now let me think what that means") is a most striking one and emphasises this difference in a very marked way. After the attack and throughout the whole of the subsequent course of the case the patient's musical power seemed to be completely lost; she could neither sing nor play and did not appear to appreciate music of any kind. The notes of the case are as follows. The patient, a woman, aged twenty-six years, was sent to me by Dr. —— on Feb. 10th, 18—, with the following statement as to her previous history:—"The patient was confined on Nov. 22nd. On the eleventh day after delivery she complained of numbness in the left arm, and the nurse noticed that she had difficulty in lifting things with the left hand. This passed off in the course of the same day. On the afternoon of the following day the nurse, who had spoken to her and found her quite well a few minutes previously, was attracted by the sound of her breathing, and on approaching the bed found her in a drowsy condition and unable to speak. When I entered shortly after I found her in a lethargic state, breathing rather heavily, and apparently unable to speak or answer questions. Her eyelids were open, but she took no notice of what was going on around her. On the following day she was found in the same condition, except that she was not so drowsy; she had occasionally followed the movements of those in the room with her eyes. She took no notice when anyone spoke to her. If a question in writing was placed before her she would stare at it for a moment, but gave no indication that she understood it. The loudest noises did not attract her attention. She moved all her limbs freely and took liquid nourishment from a drinking cup when it was given to her. On the third day of her illness she was heard to mention the name of one of her children when he was brought into the room; and for the next three or four days she spoke a word now and again, and afterwards gradually went on to say short sentences more or less correctly. About the third day of the attack she showed that she heard noises, such as the shutting of the door, &c., and also that she understood to some extent *written* questions. She would reply to such a question in writing with considerable intelligence, writing in a good hand but with occasional misuse and mixing up of words. She could also read aloud from a book, with a mistake now and again in pronunciation. It was about four or five weeks after the beginning of her illness before she was able to understand any spoken word. At first she would only pick up very occasionally a single word in the conversation that was addressed to her and would repeat it to herself, but a slow improvement had gone on, and for the past four or five weeks she had been able to repeat with more or less correctness the words of a sentence spoken slowly by another, and to take up its meaning when finished. The pulse and temperature have been normal throughout. The following are copies of two letters which she sent to me; the first was written of her own accord and was a request for a tonic; the second she was asked to send so that I might judge whether there had been any improvement":—

"3rd January, 18——.

"DEAR DR. ——,—I think a little note to let you see and to think it is a little better yesterday. I two notes and ther is a little nonsense read yes I let me to let you know I would like to a deal to make stronger than I was, so I would like now to take more of the housekeeping and take care of the little children so I think you give me if from you so as to make me eating more for I be glad to so a great deal. May I get a little iron do you think? May I get from you just a little to make me something to sleep I allsay seem to think all take me all I am wrong. It reminds thinking all and I dont sleep and then I find the head so stupid too full, and I cannot too many. I am so glad you thinking well. I think you have been *very* kind to me and I am such a kind Doctor. I hope you to glad from us and give you a very Happy New Year and give you from —— and I a very kind regards.

"——."

This letter was written in pencil in a good hand; the letters were well formed; the punctuation, spelling, &c., were exactly as above.

The following, which was written in ink, shows decided improvement in the power of spontaneous writing:—

"January 24, 18——.

"DEAR DR. ——,—I am so glad to think now that you thought that I am improving quickly. How splendid it will be, when I hear you quite well, however I thought perhaps I would never know so much better. Every one has been very kind to us all. ..... How very very many every day you see to the ill ones. How fearfully sad it be must for you and how many getting better too. How *very* good and kind you have been to me. With very kind regards and —— join.

"——."

The previous history, as ascertained from her husband, was practically the same as that given above. He stated: "For the first three or four days after the cerebral attack she was stone deaf, unable to hear loud noises, such as the dinner bell rung loudly in her room. The first sound which she appeared to hear was a poker falling. She did not understand any single word which was said to her for four or five weeks. During this period she could speak and frequently asked questions, and she could understand short written questions and would answer them quite correctly. When she asked a question she would request that the answer should be made in writing. This was the only way in which she could be made to understand. During this period she was able to write, but in writing she made frequent mistakes. Before this confinement she was in perfect health. She has two other children. Both the previous labours were rapidly and satisfactorily recovered from. She is naturally of a nervous temperament and is at times very much depressed, thinking she will never recover her power of hearing and understanding spoken language. Since she began to regain the power of understanding spoken language I have noticed that when she is nervous or excited or fatigued her ability to understand what is said to her almost entirely disappears. When she fails to understand a spoken question she will often say so, and then ask that it should be written down. She then generally understands it." When I saw her the patient had a distinctly vacant expression. Her general health was now fairly good. She slept well. The appetite was rather poor, the tongue somewhat furred, and the bowels constipated. The heart was healthy. The radial pulse was 90. The temperature was normal. The kidneys and liver appeared to be healthy. She had had a good deal of neuralgic pain about the head. The teeth were bad; they had not been abstracted, for in the weak state in which the patient had been it had not been considered advisable to allow her to have chloroform. There was no paralysis in the face, arms, or legs. The grasping power of the right hand, as measured by the dynamometer, was twenty-five and that of the left fifteen (fairly normal for a woman of her physique who has passed through a long and severe illness). The patient was right-handed. The tactile sensibility in all parts of the body appeared to be normal and equal on the two sides. The knee-jerks were normal. The condition of hearing and of the auditory speech centre, so far as ordinary sounds were concerned, seemed quite perfect. She could hear a watch ticking and the tuning fork at a distance of two or three feet from either ear. At this stage of the examination she volunteered the statement, "Is it not a strange thing that I can hear the clock ticking and cannot hear you speak? Now let me think what that means." A marked condition of word-deafness was present. As has been stated above, she was completely word-deaf for several weeks after the onset of the attack. It was only during the past fortnight that she had answered any questions which had been put to her in spoken language. She could now understand some things which were said to her. She understood best when one word was said to her at a time. She was quite unable to understand a long or complicated question. She could understand some short sentences when the words were very slowly and distinctly spoken. It was often necessary to repeat a word more than once before she grasped its meaning. Often, too, she could only understand the significance of a question when the question had been repeated in a different form—a word of the same significance substituted for one which she could not understand. Thus, when asked very slowly and distinctly, "How old are you?" she answered correctly, after an interval, "Twenty-six." Asked, "When was your baby born?" she answered correctly after an interval, "On November 22nd." She always hesitated a long time and seemed to take much time to think

out the meaning of simple questions before she answered them. When asked, "Let me see your tongue," she made no response, and evidently failed to understand the question. Her husband said that she understood spoken language better when she did not see the speaker—when she was spoken to from a distance and when spoken to quietly and not loudly. He further said that she was able to understand children better than grown-up persons. She herself volunteered the statement to him that they (grown-up people) had too many teeth. Her power of understanding spoken language depended, he said, upon her spirits; it was always worse at night and when she was tired. When asked a question she often echoed the last part of it and then, after repeating some of the words, seemed to understand their meaning (the question here arises whether she did not get information as to the meaning of the words by aid of the ingoing—kinæsthetic—impressions which result from the vocalisation and motor movements attending the production of the words). Thus when asked, "Are you better?" she repeated the word "better," obviously in an automatic, reflex way, then brightened up and said intelligently, "Yes, better." Asked, "Have you any headache?" she repeated the word "headache" in an automatic way, then brightened up and said after hesitation, "Yes, often." Asked, "Are you giddy?" she echoed the word "giddy," then brightened up and said, "No." I subsequently ascertained that after the attack and throughout the whole subsequent course of the case the patient's musical power seemed completely gone; she could neither sing nor play and did not appear to appreciate music of any kind. With regard to the condition of the motor vocal speech centre, a certain degree of paraphasia was present; but with this exception the motor (emissive) faculty seemed to be little affected. She certainly spoke much more correctly (made use of spoken language much more correctly) than I would have supposed from the mistakes which she made in writing (see the letter of Jan. 24th, written a fortnight before I examined her). She volunteered statements, spoke spontaneously, asked questions, and expected to be answered; if she did not understand the answer she asked that it might be repeated, or asked that it should be written down. She seemed to be able to say almost everything she wished to say, but she occasionally made use of a wrong word; for example, she said "My hair" instead of "My skin." Her husband stated that during the early stage of the attack she made frequent mistakes of this kind, and she used to use the word "scarf" for almost everything. He added that the mistakes were chiefly confined to the names of things (objects); very soon after she regained the power of speech she could use the parts of language other than nouns quite well without making mistakes. (In her written speech the mistakes involve all parts of speech, nouns perhaps least of all.) Often when she could not get a word she used to spell it and then pronounce it. In the act of spelling the auditory speech centre and the visual speech centre are both brought into play. Most people spell chiefly by the revival of auditory impressions, though the influence of the visual speech centre is in many persons very active; witness the fact that when doubtful about the spelling of a word many people write it down to see how it looks. In most people both sensory speech centres are called into use. The patient in Case 2, though unable to read, could write quite well, but could not read a single word that she had just written, yet she could spell perfectly. This patient, who was almost completely word-deaf, often when she could not get at the meaning of a word, would spell it out, then pronounce it, and then understand it. As to the ability to repeat spoken language, although she was unable to understand most things that were said to her, she could repeat words and sentences which she did not understand. This was very remarkable and difficult to understand. Further—and this was also very curious—she could write down words and sentences which she did not understand (when spoken), and could then understand them after she had written them. I asked her, for example, the question, "Do you like to come to Edinburgh?" She did not understand it. I then asked her to repeat it after me. She did so without hesitation. I then asked her to write down the words she had just said. She did so without the words having to be repeated a second time, and she then undoubtedly understood the question. At this stage of the examination her husband volunteered the statements that her memory was excellent and that "she repeated what she heard by sound and not by sense." When asked, for example, "How old are you?" she repeated, "Old are you"; then brightened up, and after an interval said "Twenty-six." When asked, "Have you any headache?" she repeated "Headache"; then brightened up and answered, "Yes, every day," and pointed to her forehead. She repeated after me, "Monday, 22nd," "Where are you?" "Where are you to-day?" and "Are you in Edinburgh?" As to the condition of vision and the visual word centre, her sight was perfect, V. = $\frac{6}{6}$. There was no hemianopsia. The optic discs were normal. The pupils were equal and of medium size. She readily understood short questions which were put to her in writing. She occupied a good deal of her time in reading, but her husband said that she did not seem to understand much that she read; she apparently was unable to grasp the meaning of long and complicated sentences, though she generally had no difficulty in understanding short written questions. She seemed, he said, only to be able to understand one sentence at a time. If she read for any length of time she seemed to get confused and not to be able to understand. She recognised and generally named correctly any object which was shown to her. Thus she named correctly a watch. Asked what a tuning fork was, she said "for music, a fork to sing" (slight degree of paraphasia), made it vibrate and held it to her ear, showing that she understood what it was. When asked to pick out a knife, pencil, and buttonhook from a number of different objects she did so correctly. She named scissors, pencil, and india-rubber correctly. The following questions, which she was unable to understand by the ear (when spoken), she was able to understand when written:—"Can you repeat words after me?" "Say the words 'I say.'" "Do you like to come to Edinburgh?" "Can you write what you have just said?" "What do you call it?" (showing her a watch). "Please shut your eyes and tell me what you hear." "Squeeze it [dynamometer] as hard as you can." "Do you feel quite well when you are touched?" "Please look steadily at my eyes and tell me if you see my finger moving." "Do you see my finger?" "You see my finger quite distinctly in all positions?" She read aloud without any hesitation, correctly, but with a somewhat monotonous expression, the following sentence from a book on my consulting-room table: "No issue of a medical journal would be complete at the present time without containing the latest development in this greatest medical experiment of all time." Her mental faculties seemed to be comparatively little impaired. Her husband said that her memory was very good. She could multiply, add, and subtract figures correctly, but she performed all these mental operations very slowly. The following are illustrations. When asked to multiply 60 by 3, the answer, after hesitation, was written by the patient 180. When asked to subtract 54 from 162 the answer was written by the patient slowly, 108. When asked to add together 122 and 101, the answer written by the patient was 223. The sense of smell seemed unimpaired. When asked, "Can you smell?" she made no indication that she understood the question. Some oil of peppermint was then placed to her nose. She immediately said, "Yes, something like strong sweeties." When asked, "Is it peppermint?" she said, "Yes—taste said to be good." The future progress of the case is told by the following letters:—

"March 9th.

"I think it is about a month since we went to Edinburgh to see you. My husband thinks I can hear a very little better, and I am so glad and thankful and it will be splendid when to be quite better. I have taken two bottles from you have given. I have got very bad with indigestion and with newlargia in the system. I got from Dr. —— antipyrine powders. We think of going to —— and I hope the change will be good for me and will be glad if I feel stronger."

I append a portion of this letter in facsimile to show the exact character of the writing (see Fig. 21).

"April 9th.

"Many thanks for your last note. We went to near —— for a week, but the weather was very very cold.

"We think I can hear a little better, but the progress seems very slowly and very little of the general conversation.

"I have got still indigestion and so very cold and chilly all through I think from the circulation of the blood.

"The worst of all the pain is newlargia in my head and I have no toothache. Do you think there is two kinds of headaches, newlragia and from the forehead so hot and always acking, sometime I think from not enough of blood or too slow, or weakness, and such a horrid feeling of lightness and dazed. I will be so glad when I feel I am better. Sometimes I wonder if I really will be so well as before the illness."

On May 28th her medical attendant wrote to me as follows:—

"Mrs. —— (case of aphasia) has not been so well for the past month. After you saw her in February she slowly but steadily improved in the matter of understanding spoken speech, and about six weeks ago if one

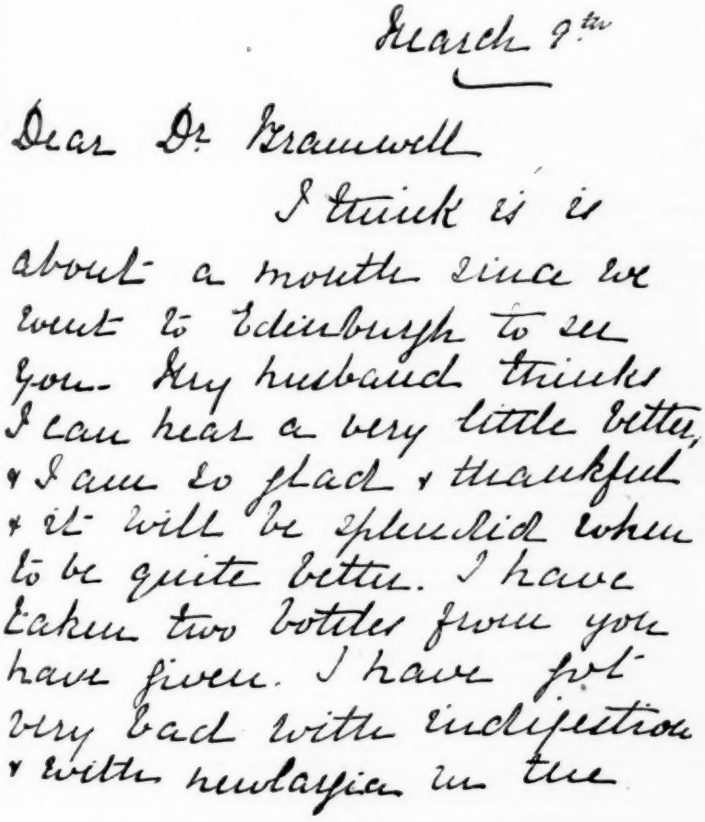
spoke slowly and distinctly she took in almost everything that was said to her. She could not, however, take part in a general conversation, but occasionally picked up what was being said by those around her. Her power of expressing herself in writing, as you would observe from the letters she wrote, had also improved very much. All along she has complained a good deal of uneasy sensations and pain in her head. She has also had a considerable disinclination for food and there has been much difficulty in getting her to take an adequate amount of nourishment. About a month ago she commenced to complain of feeling very tired and weak, and also of some pain in the head—across the eyebrows and over the vertex. She took to bed and has not been up since. The pain seemed to be constant, with paroxysms of increased severity, and accompanied by great intolerance of light and sound. There was no paralysis. Sometimes she complained of pain in the left arm and leg, and once or twice of stiffness of her left forearm. The pulse was slightly quickened, from 96 to 100, but regular; the temperature was normal; the tongue was coated and she had a great dislike for food. Examination of the eyes, so far as it could be made, revealed nothing abnormal. About ten days ago she ceased to complain of the pain in her head, but at the same time began to show a great falling off mentally. She has much less power of expressing herself and does not understand what is said to her so well. She is very emotional. Occasionally she rambles a good deal—imagines there are people in the room, that she is not in her own house, &c. She is rather thin, but her general strength is fairly good. The treatment she has got lately has been ice to the head when the pain was bad, blister to the nape of the neck, small doses of iodide of potassium combined with bromide of potash, and frequent feeding. If you have any suggestions to make I will be very glad to hear from you."

And again on Aug. 6th :—

"I have omitted to let you know of the death of our patient, which occurred about five weeks ago. After I wrote you she got steadily weaker. She fell off very much mentally—talked incoherently, understood very little of what was said to her, and had the delusion that she was not in her own house, that there were people in the room, &c. About a week before her death the temperature began to rise at night and ranged from 101° to 103° F., and on the day she died it was as high as 105°. I tried hard to get a post-mortem examination, but failed."

(*To be continued.*)

FIG. 21.



March 9th

Dear Dr Bramwell

I think it is about a month since we went to Edinburgh to see you. My husband thinks I can hear a very little better, & I am so glad & thankful & it will be splendid when to be quite better. I have taken two bottles from you have given. I have got very bad with indigestion & with neuralgia in the

Portion of a letter written by the patient on March 9th (Facsimile).

THE MALIGNANT TUMOURS OF INFANCY, CHILDHOOD, AND YOUTH.

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(*Continued from p. 1196.*)

TESTIS.

THE malignant neoplasms of the testis, especially those of early life, are remarkable for the great frequency with which heterotopic structures—such as cartilage, striped muscle, unstriped muscle, and epithelial elements, often ciliated—are found in them. Many circumstances point to aberrant elements connected with "rests" of the Wolffian body, lodged in the rete testis, as the germs whence most tumours of this kind arise. It is believed that the junction between the Wolffian tubules and the tubuli seminiferi is brought about by the forward growth of the Wolffian tubules into the hilum. At this stage fragments of the adjacent proto-vertebral matrix, &c., may readily be dislocated and become embedded in the evolving organ, where they constitute the "rests" above mentioned. The difference between the ovarian and testicular development in this respect may be the reason why these heterotopic elements are absent from ovarian neoplasms; at any rate, the ovaries are developed in just as close proximity to the proto-vertebral matrix as the testes, and were there not some special difference in their ontogeny the former would be just as liable to these heterotopic inclusions as the latter. Of 51 malignant testicular neoplasms tabulated by Curling,[66] in 5 the disease began under the age of five years and in 1 between fifteen and twenty years. These tumours are occasionally met with at birth and sometimes they are bilateral. They are often described as "cancers," but in reality they are almost always sarcomata, and this is shown by the nature of their metastases. Examples have been met with by Parker[67] at three months, Hutchinson[68] at five months, Silcock[69] at eight months, Depaul[70] at ten months, Chaffey[71] at eleven months, Louvet[72] at sixteen months, Schlegtendal[73] at eighteen months, Butlin,[74] Marsh,[75] and Hertzberg[76] at two years, Johnson[77] at two and a half years, Battle[78] and Neumann[79] at three and a half years, Jacubasch[80] at six years, and Ribbert[81] at thirteen and fourteen years. Trélat[82] has collected 26 cases recorded prior to 1884. In a congenital case of this kind seen by Weber,[83] in which cartilage largely predominated, the tumour—which at birth was of the size of a pigeon's egg—increased in the course of fifteen months to the size of a goose's egg. I have seen a case of adeno-myxo-sarcoma of the left testis in a youth nineteen and a half years old, who died from acute dissemination of the disease sixteen days after castration; when metastatic nodules were found in skin, eye, triceps muscle, both lungs, liver, both kidneys, small and large intestine, and in the retro-peritoneal glands. Edwards[84] has met with sarcoma of the

epididymis in a child four years old, and Walsham[85] with myxo-sarcoma of the spermatic cord in children aged thirteen months and four years. Marchand thinks that some malignant tumours of the epididymis arise from aberrant suprarenal "rests."

EYE.

In infants no part of the body so frequently originates malignant neoplasms as the eye. Nearly all tumours of this kind are gliomata, but sarcomata of the uveal tract, both pigmented and non-pigmented, are now and then met with. Of 155 consecutive malignant intra-ocular neoplasms from the Prague Clinic 24 occurred in children of from one to ten years old. Gliomata are peculiar to early infancy; they are rare after five years of age, and they hardly ever occur after twelve years. Gliomata have been met with at birth, and exceptionally both eyes are simultaneously affected, but it is much commoner for the disease to begin in one eye and thence to spread to the other. Of 8 cases within my own experience the ages at which symptoms of the disease first appeared were seven months, nine and a half months, fourteen and a half months, sixteen months, one and three-quarter years, two years, three years, and eleven years. In the first 4 of these cases the disease was almost certainly congenital. In 1 case metastases were met with. There are good reasons for believing, as Wintersteiner[86] has shown, that most tumours of this kind arise from "rests" sequestrated from the evolving retina during embryonic life. An instance of congenital sarcoma of the choroid has been reported by McKay,[87] and Williamson[88] has met with spindle-celled leuco-sarcoma of the iris in a girl fourteen years old.

Besides such tumours as the foregoing, a certain number of malignant neoplasms arise in the orbit during early life, quite independently of the eyeball. Thus Courant[89] removed a large congenital teratoid tumour from a newly-born male child, which contained numerous heterotopic elements, and there was defective development of the corresponding orbit. It seems likely that tumours of this kind may originate in association with fœtal inclusions connected with the orbito-frontal fissure.

Probably the "ossifying epithelioma" of the orbit described by Silcock[90] in a young boy, as well as the various more or less malignant ossifying and chondrifying orbital tumours, such as those recorded by Reid[91] in a youth aged nineteen years and by Beaumont[92] in a girl aged sixteen years, also originate from embryonic inclusions. At any rate, we know that such inclusions not infrequently do arise in this vicinity, of which the various congenital orbital cysts and other developmental defects are the evidence. Moreover, Axenfeld has demonstrated the frequent occurrence of islets of cartilage in the otherwise normal orbit. The following instance has come under my own observation.

CASE 5.—A young woman, aged nineteen years, with left proptosis and other signs of orbital tumour. On examination a firm nodulated new growth was felt attached to the upper margin of the orbit. The adjacent lymph glands were normal. Excision of the tumour was performed, and the growth seemed to be limited to the upper part of the orbit and was unconnected with the eye. Recurrence *in situ* took place two and a half years later and excision was again resorted to. A further recurrence took place nine months later, for which the orbit was cleared out. The globe and optic nerve were quite free from disease. The tumour seemed to have originated from the upper and outer part of the orbit.

Other examples of rapidly growing sarcomata of the orbit have been demonstrated by Knaggs[93] in a child aged two and three-quarter years; by Lambert[94] in a boy, aged three years; and by Snell[95] in a girl aged four years, &c. Lagrange[96] has met with a myxo-sarcoma of the sheath of the optic nerve in a boy aged five years.

Besides the foregoing, other sarcomata are found in the orbit which originate quite outside it. The following instance in which the disease arose from the region of the basi-sphenoid has come under my notice.

CASE 6.—A healthy-looking youth, aged eighteen and a half years, with left proptosis and other signs of intra-orbital tumour. The scar of a former operation was seen along the left side of the nose. A swelling from a recurrent growth was present in this region. The left naris was blocked by the new growth. The disease was of eighteen months' duration. Six months previously a sarcomatous growth was removed from the left naso-orbital region by incision along the side of the nose. It seemed to spring from the basi-sphenoid. The floor of the orbit was perforated by the tumour. Soon afterwards recurrence set in. No further operation could be done.

Some remarkable examples of neoplasms of this kind have been published. Lawson[97] had under his care an interesting case of this kind.

CASE 7.—The patient was a male child only two days old, in whom the disease existed at birth; there was rapid recurrence after removal of the tumour, which was a multilocular cyst with much solid new growth. On histological examination it proved to be a round and spindle-celled sarcomatous teratoid new formation containing cartilage, epithelial elements, and other heterotopic structures.

Holmes[98] has met with a similar case. Other instances have been recorded by Targett[99] in a male infant aged one year; by N. Moore[100] in a boy aged one and a half years; by Chaffey[101] in a female aged three years; by Jessett[102] in a female aged one year and seven months; by Pollock[103] in a female five years old; and by Dickinson[104] in a boy aged twelve years. Such tumours probably arise in connexion with developmental aberrations in the vicinity of the anterior extremity of the notochord.

Several instances of cancer of the conjunctiva in youth are on record. Rogman[105] has recently reported an instance in a boy aged fourteen years, and Panas has seen similar cases at twelve and thirteen years of age. The latter observer has pointed out the remarkable fact that in nearly all these cases the disease begins at the outer side of the lower part of the corneo-scleral margin, which is just the spot where congenital dermoid patches are of commonest occurrence.

KIDNEY.

Next to the eye the kidney is the locality in infants whence malignant neoplasms most frequently arise. Judging by the large number of recorded cases, malignant disease of the kidney is of even more frequent occurrence than Duzan's list would lead us to suppose; and some writers consider that the kidney is more often affected than the eye. This proclivity of infants to malignant renal disease is the more remarkable when the extreme rarity of the affection at other periods of life is borne in mind. Tumours of this kind are invariably sarcomatous, although in the older reports they are often described as "cancers," owing to the occasional presence of epithelial structures of simple tubular or papillary cystic type, in the sarcomatous matrix. In certain cases these epithelial elements may be derived from "rests" of the Wolffian body, or from separated fragments of the renal parenchyma itself.* Striped muscle fibres are frequently met with; and it has been remarked that when they are most abundant the tubular structures are generally absent or scanty. I am not aware that either cartilage or bone has been found in these neoplasms, but angiomatous structures are of common occurrence. It seems probable, from recent observations by Lubarsch,[106] McWeeney,[107] and others, that renal sarcomata may not improbably often be derived from suprarenal "rests." Sudeck thinks that some of them arise from "rests" of hepatic origin. The subject is still *sub judice*. The development of the kidney is of such a complicated nature, and so many adjacent structures are liable to be implicated, that it would be surprising if fragments of some of them were not frequently included in it. To such sources we must look for the germs whence most of these neoplasms arise. Renal sarcomata are frequently bilateral, multiple *ab initio* and congenital, but most cases are first noticed during early infancy. Like their congeners of the testis and ovary, these tumours are generally circumscribed, and they usually indent the contiguous renal tissue rather than infiltrate it. Cohnheim[108] seems to have based his celebrated theory of neoplastic pathogeny largely on a case of this kind which he observed in an infant aged sixteen months. In the left lumbar region he found a large tumour, to the border of which the remains of the left kidney, otherwise unaltered, adhered. Within the capsule of the right kidney, at its upper end, there was also a small round circumscribed tumour quite distinct from the kidney substance. Both contained striped muscle fibres and sarcomatous tissue. Of 37 examples of these tumours collected by Röhrer[109] in children aged under ten years, 16 were under two and 31 under five years, and 1 was newly born. Leibert[110] has since tabulated 50 similar cases, and Jacobi[111] 43. Paul,[112] Windle,[113] Eve,[114] and others have published interesting papers on this subject.

I have seen a case of malignant disease connected with the kidney of a male child aged two years quite different from any of the foregoing. Laparotomy was performed for a large tumour occupying the left renal region, but the adjoining glands were so extensively infiltrated that its removal was not attempted. The child died not long afterwards,

* The number of lobules composing the human kidney is greater than is generally believed. According to Maresch, from eight to eighteen distinct lobules can easily be recognised in the fœtal organ. Many incomplete lobules also exist, so that altogether traces of from twenty to fifty lobules may be found in every fœtal kidney.

and at the necropsy the left kidney was found to be surrounded by a mass of soft, ecchymosed myxo-sarcomatous new growth, which had evidently sprung from the peri-renal fatty envelope, for it was distinctly outside the renal capsule, and the kidney itself was unaffected. I have since seen a similar case in an adult, and the glands being unaffected it was successfully removed.

Cancer of the kidney occurs only in adults, and it is very rare; instances have been recorded at the age of twenty-one years by Israel,[115] by N. Moore[116] in a man aged twenty-five years, by Sharkey[117] in a woman aged twenty-eight years, and by Newman[118] at various ages.

SUPRARENAL BODY.

Although the suprarenals so rarely originate malignant neoplasms, that of 8378 consecutive cases tabulated by me only 1 arose in this connexion; yet of the 36 cases of which I have records I find that more than one-third belong to the periods of infancy and childhood. These tumours are occasionally met with at birth, and they may be bilateral. They are invariably sarcomatous, although often described as cancerous. Accessory suprarenal bodies sometimes originate similar tumours, but it is probable that some neoplasms thus described spring from aberrant renal lobules. In a child eight and a half years old Ribbert[119] met with a tumour of this kind which was connected with the outside of the capsule of the kidney in the vicinity of the renal pelvis. Marchand has found accessory adrenals in situations far removed from their normal habitat, such as the margin of the broad ligament and the epididymis.† Instances of malignant suprarenal tumours have been reported by Parker[120] and Dalton[121] in infants only a few weeks old, by Martin[122] at five months, by Cohn[123] at nine months, by Eberth[124] at fifteen months, by Fox[125] and Mankiewicz[126] at two years, by Earle[127] at three years, by Lazarus[128] at four years, by Greenhow[129] at twelve years, by Peacock[130] and by Fränkel[131] at eighteen years.

BLADDER.

In this organ sarcomatous tumours are occasionally met with in early life. The disease usually assumes the polypoid form, and multiple tumours are often met with, or a polypoid condition of the mucosa accompanies the sarcomatous tumour. The condition is analogous to that which so frequently occurs in the vagina; and no doubt its origin is connected with similar embryonic developmental aberrations. These growths are commonest in the lower part of the bladder—that is to say, in the region most intimately connected, developmentally, with the vagina. Steinmetz[132] has collected 32 cases of this kind. Most instances are met with in early infancy, and both sexes are affected. Cases have been reported by D'Arcy Power[133] in an infant, by Shattock[134] at one and a half years, by Dittrich[135] at one and three-quarter years, by Chaffey[136] at three years, by Löhr[137] at three and three-quarter years, by Chiari[138] at five years, and by Fenwick[139] at eight years.

PROSTATE.

Of 96 primary malignant neoplasms of the prostate tabulated by Engelback, 10 per cent. originated in early life—3 in the first year, and 6 in the next 9 years—all of these early neoplasms being sarcomata. Of 16 recently recorded cases collected by me, in 2 the malady began under twenty years of age. It is a very rare affection at any time of life. The instances met with in early life are invariably sarcomatous; and, according to Barth, about half the recorded cases of prostatic sarcoma belong to this period. Examples have been reported by Jordens[140] and Barth[141] at nine months, by Solly[142] at three years, by Wind[143] at five and a half years and at eight months, by Barth[144] at seventeen years, by Coupland[145] at nineteen years, and by Wyss[146] at various ages.

LIPS, TONGUE, AND ŒSOPHAGUS.

The following examples of "cancer" of the lip in early life have lately been recorded by Krasnobaeff[147] (of the upper lip and right ala nasi) in a child eight years old; by Batashoff[148] (of the lower lip) in a girl aged thirteen years; and by Gangolphe[149] (of the upper lip) in a boy aged fifteen years. In all the disease was of the epidermoidal variety. The foregoing cases were "histologically verified"; but whether, in doubtful cases, a diagnosis based solely upon histological analysis can be implicitly trusted is a question I should be inclined to answer in the negative. For the present, therefore, it will be best to regard the morphological diagnosis of such cases as the foregoing as still *in limine*. Of 1003 cases of cancer of the lower lip collected by Paget and Jessett[150] from various sources there was not a single instance of the onset of the disease under twenty years of age; of 43 consecutive cases under my own observation the earliest age at which the disease was first noticed was twenty-six years; Winiwarter, however, reports having met with one instance of lip cancer under twenty years.

In the tongue a few examples of cancer and sarcoma in early life have been met with. In Variot's[151] case of "epithelioma" of the tip of the tongue, in a boy only eleven years old, the diagnosis of cancer rested solely upon the histological examination, the clinical signs of cancer being absent. Billroth[152] has met with the disease in a youth aged eighteen years, Winiwarter[153] at twenty years, and Haward[154] in a woman aged twenty-three years. Of 122 consecutive cases in males under my observation the youngest was twenty-five years and seven months old; of 15 cases in females the youngest was thirty-four years. Of 290 cases tabulated by Barker[155] the youngest was twenty-six years. Of Gross's 133 cases the youngest was twenty-nine years, and of Winiwarter's 136 cases the youngest was twenty years. Thus of these 696 cases in not a single instance did the disease begin under twenty years. About 24 cases of sarcoma of the tongue have been recorded, and several of these originated in early life. Congenital cases of this kind have been reported by Jacobi[156] and Mason;[157] by Stern[158] at four years, and by Lang[159] at twelve years. Such tumours are often multiple *ab initio*, and in the last-named case the neoplasm contained cartilaginous, osseous, and fatty structures. Godlee[160] has met with an adeno-sarcoma of the tongue containing a calcifying nodule in its centre in a woman aged twenty-four years. A congenital form of "epulis" has been lately described by Olivier,[161] who believes it arose from "rests" of the gingival mucosa; of this Gore[162] also has reported a good example. Similar cases had previously been described by Malassez. Myxo-sarcomatous naso-pharyngeal polypoid tumours are not infrequently met with in early life growing from the top of the pharynx. Cases have been reported by Lloyd[163] in a youth aged seventeen years and by Wolfenden[164] in a girl aged fifteen years. I have seen similar instances in a youth, who first noticed the disease when only twelve years old, and in a girl (adeno-sarcoma) aged nineteen years. Berg[165] has reported an instance of malignant disease of the soft palate in an infant aged four and a half years. Bryant[166] met with "cancer" of the tonsil at seventeen years, and Castex[167] with lympho-sarcoma in a girl aged seven years. In a young woman aged twenty-one years S. Paget[168] has seen a sarcomatous tumour of the hard palate with which epithelial pearls were associated. Cancer of the œsophagus is very rarely met with under thirty years of age. Of 18 cases under my own observation the earliest age at onset was thirty-two years and eight months. Stephan[169] has reported a case of œsophageal sarcoma in a child five years old.

STOMACH.

In early life malignant disease of any part of the gastro-intestinal tract is of the greatest rarity. Some idea of the extreme infrequency of cancer of the stomach at this period may be gathered from the fact that of 2075 cases tabulated by Welch only 2 originated under the age of twenty years. Of 2000 necropsies on children analysed by Steiner and Neureutter not a single instance of malignant disease of the stomach was met with. Nevertheless, several instances of alleged cancer of the stomach in infancy have been recorded; and in at least two of them the disease was congenital. In Wilkinson's[170] case marked thickening and induration of the pylorus was noted in a newly-born child; but since none of the other clinical features of cancer were present, and no microscopical examination was made, it is much more likely that the morbid condition was congenital hypertrophy rather than cancer. Several instances of this form of hypertrophy in infants have been met with (Finkelstein, Grau, Kops, and others), and an example of it has lately been recorded by Pitt[171] in an infant seven weeks old. A remarkable case is Cullingworth's,[172] in which a polypoid tumour—evidently congenital—was found growing from the lower border of the pylorus in an infant five weeks old. Histological examination revealed tubular structures lined

† According to Pettit the suprarenals are ontogenetically allied with the sexual glands, being derivatives of the germinal epithelium.

by cylindrical epithelium, as in cancer; but in the absence of any of the clinical signs of malignancy I should think it much more likely that the disease really was congenital adenoma, with which the histological appearances were certainly consistent. In a case of so-called cancer of the stomach in an infant one and a half years old, reported by Kaulich,[173] the disease was probably sarcomatous, but as other organs were affected it is doubtful whether the disease really originated in the stomach. In Kühn's[174] case of "Adenoid Cylinder-celled Cancer" in a female infant two years old the disease was probably adeno-sarcoma of congenital origin. N. Moore[175] has described a case of "Alveolar Cancer" of the cardiac end of the stomach, close to the œsophagus, in a girl aged thirteen years. The type of cancer met with in this case, as well as the situation of the tumour, are very unusual, and to my mind these circumstances suggest the origin of the disease from congenitally dislocated œsophageal glandular structures. An instance of cancer of the pylorus (with dissemination in the spleen) in a child aged fourteen years has been published by Scheffer,[176] at seventeen years of age by Köster[177] and Landouzy,[178] at nineteen years of age by Hirtz,[179] and at twenty years of age by Glynn[180] and others.

Sarcoma of the stomach is a very rare affection, of which a few examples have lately been met with. Of 352 consecutive cases of malignant disease of the stomach tabulated by me there was not a single instance of sarcoma, and Gurlt's table, which comprises 1103 similar cases, is equally devoid of sarcoma. Pitt[181] has described four cases of lymphadenoma of the stomach in boys aged from four to twelve years; and Hueter[182] reports examples of congenital adenoma.

INTESTINE.

More cases of malignant disease are met with in early life in the intestines than in the stomach. The instances of so-called cancer of the small intestine reported by Duncan[183] at three and a half years, and by Spanton[184] at twelve years (ileum), were evidently sarcomatous. Madelung[185] has described 14 cases of sarcoma of the small intestine in patients of various ages, mostly young; these growths are often multiple and sometimes congenital. In the large intestine similar neoplasms have been met with, but they are rarer. In an infant a few days old Stern[186] met with a fungoid sarcomatous tumour growing from the ileum which had caused death by obstruction. It was an endothelial angio-sarcoma, evidently of congenital origin. Spanton's case of "medullary cancer" of the ileum in a twelve-year-old child belongs to the same category, and with it Steiner's[187] case of "alveolar cancer" of the sigmoid in a child nine years old should be classed. Pépin[188] has described a case of sarcoma of the jejunum in a female child five years old; and Bessel-Hagen[189] a similar case in a boy aged seven years. Abbe[190] has met with sarcoma of the caput coli in a youth aged sixteen years; Homans[191] with sarcoma of the cæcum in a girl aged five years; Kanthack[192] with myxo-sarcoma of the colon in a lad aged seventeen years; and Debrunner with sarcoma of the transverse colon in a boy three years old. Of 227 intestinal cancers in which Gurlt noted the age distribution the disease originated under twenty years in 2—viz., at thirteen years and nineteen years.

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(To be concluded.)

ON SENILE TUBERCULOSIS AND SUBCUTANEOUS (TUBERCULOUS) ULCERATION.[1]

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SEVERAL examples of tuberculous disease occurring in old people have, within the last few months, been under observation in the wards of which I have charge in St. Bartholomew's Hospital. I hope it may be of interest if I briefly relate some of them, and make some reference to the general question of senile tuberculosis. Some discussion appears to be desirable, for although Sir James Paget's original essay on senile scrofula was published in 1867, in some of the principal manuals of the present day the subject is not even mentioned, while in others it is referred to in so cursory a manner as to convey the impression that it is of little importance in the practice of surgery.

[1] A paper read before the Medical Society of London on April 26th, 1897.

My own experience has led me to believe that the opposite of this is, in reality, the case. The disease in its various manifestations is frequent rather than rare; its early recognition is often difficult; indeed, it is apt to be overlooked by those who regard it as a mere pathological curiosity. Prognosis is generally very unfavourable, and the treatment raises questions of considerable gravity from the patient's point of view. Among the cases met with have been the following:—

CASE 1. *Large double iliac abscess, probably dependent on Pott's disease.*—The patient, a man aged seventy years, was admitted into St. Bartholomew's Hospital about six weeks ago with two iliac abscesses of very large size; that on the left side was already pointing, and proved, when it was opened, to contain about two pints of pus. The cavity was scraped and drained. This abscess is now very nearly healed. The second abscess will be opened in a few days.

CASE 2.—A woman, aged seventy-four years, was recently admitted for an iliac abscess on the right side. Here, as in the former case, there was no angular curvature or other conclusive evidence as to the precise origin of the abscess; but it must be remembered that angular curvature may be absent, notwithstanding the presence of advanced Pott's disease in patients of middle or advanced life. In such patients the vertebræ are so massive and formed of such strong bone, that, although excavation occurs, their framework often resists deformity; while in other cases the disease takes the form of a spreading periostitis, and excavation is either absent or present to only a slight extent. It seemed probable that this patient and the patient in Case 1 were suffering from Pott's disease.

CASE 3.—Last year a woman, aged sixty-nine years, was admitted into the hospital suffering from spinal disease. On examination she was found to have a very marked angular curvature at the level of the eighth dorsal vertebra. The spinous process of this vertebra was sharply prominent and the column above this point for eight or nine inches was perfectly straight. The patient said that for the previous twelve months she had suffered from pain in her back and round the sides of her trunk, and that the deformity of the spine had been progressing for nine months. She could now move and walk only with difficulty, and was obliged to lie down during the greater part of the day. This patient, who came from a distance, was supplied with a poroplastic jacket and discharged, and I heard no more of her. That the angular deformity in this case was due to tuberculosis seemed clear. The alternative view that it depended upon new growth—sarcoma or carcinoma—appeared to be negatived by the absence of severe pain, and of paralysis, and also by the period over which the case had extended; for malignant disease of the spine is generally fatal within nine months, and this patient, although her spinal disease had existed for more than nine months, was still in very fair general health and condition.

CASE 4.—The following remarkable case has lately been under observation. A woman, aged seventy-two years, developed what was evidently tuberculous disease of her left ankle. The joint became the seat of a slowly increasing fusiform swelling involving it in all its aspects. The patient was unable to bear any weight upon the foot and the muscles of the calf underwent marked atrophy. In the course of three months suppuration occurred, and in spite of free incision, scraping, and drainage, pus burrowed widely amongst the tendon sheaths of the deep muscles. Amputation was performed at the junction of the middle with the lowermost third of the leg. The stump healed favourably, although very slowly. A year afterwards the lower third of the left ulna became the seat of extensive tuberculous periostitis, attended with dusky redness and œdema of the skin and considerable pain. Free incisions were made and the granulation tissue was scraped away. The wound slowly healed and the patient remained well for three years. At the end of this time her right ankle became involved in considerable swelling, which seemed obviously to depend upon tuberculous synovitis. Within two months the joint had become disorganised, and the ligaments had been so far destroyed that free lateral movement was easily produced. Suppuration occurred, and as the tissues in the lowermost third of the leg were becoming œdematous, amputation was performed six inches above the joint. The patient, who was now seventy-six years of age, bore the operation perfectly well and the wound soon healed. On dissection the joint was found to have undergone extensive tuberculous disease. The synovial membrane was converted into a thick layer of pulpy granulation tissue. The articular cartilage was almost destroyed, the bones in places were somewhat deeply eroded, and the principal ligaments had in great part disappeared. Microscopic examination showed that the disease was beyond question tuberculous in character.

CASE 5.—There was recently in the hospital a patient, aged seventy-two years, who had been suffering for fifteen months from tuberculous disease of the outer and front portion of the left foot. On examination, the metatarso-phalangeal joint of the little toe was found to be disorganised and occupied by granulation tissue, and a sinus led into the substance of the external cuneiform bone, which was in a state of rarefying osteitis.

CASE 6.—Two years ago a man, aged fifty-six years, was under treatment for what at first appeared to be osteo-arthritis of his right knee. The joint had recently become a little swollen, stiff, and painful. There was some grating on movement, and the muscles of the thigh were markedly wasted. The knee, however, became more and more swollen, the synovial membrane was thickened and pulpy, and the skin over the joint was dusky and abnormally warm. Within three weeks of the patient's admission, and about two months after the commencement of the disease, the joint suppurated, and in spite of complete rest, went from bad to worse, and was amputated three weeks later. On examination it was found extensively disorganised by tuberculous disease. The synovial membrane was converted into a thick layer of granulation tissue, the articular cartilages were eroded, and reduced to thin wafer-like plates, detached from the bones. The bones themselves were in some parts deeply ulcerated. The patient quickly recovered from the amputation.

Several other examples of senile tuberculosis which I remember to have seen might be related, but it will be enough merely to mention them. A patient, aged sixty-five years, with tuberculous epididymitis; a man aged sixty-eight years, with enlarged and suppurating cervical glands; a man aged seventy-five years, with rapid disorganisation of the wrist joint, requiring amputation; a woman aged sixty-seven years, with tuberculous caries of the metacarpal bone of the thumb; a woman, aged sixty-two years, with tuberculous disease of the axillary glands, imitating carcinoma; and tuberculous disease of the kidney in a woman aged fifty-eight years.

The symptoms produced by senile tuberculosis are identical with those met with in the more severe examples of the corresponding forms of tuberculous disease in the young—e.g., in tuberculous disease of the tarsus in a person aged seventy years, the character, position, and extent of the swelling, the congested and dusky condition of the skin and the appearance of any ulcers that form—all these are indistinguishable from the like features when they are observed in a patient aged ten years. The main difference—needless to say, it is one of great importance—between tuberculosis in the old and in the young is that while in the young, if adequate treatment is adopted early and properly carried out, recovery is the rule; in the old, in spite of the best known treatment, the progress of the affection is in the majority of cases from bad to worse. In a joint, for example, the synovial membrane rapidly becomes widely infiltrated with tuberculous products, which quickly undergo caseation. The articular cartilage is destroyed and suppuration takes place. This leads to the formation of large burrowing collections of pus and complete disorganisation of the affected joint, so that amputation is the only course that can be recommended. In other parts—e.g., the testis or the lymphatic glands—early suppuration, with breaking down, occurs. The unfavourable progress in these cases is so constant that I do not myself remember to have seen repair take place in a tuberculous joint in any person over fifty years of age. The disastrous results that will probably follow when one of the large joints, such as the hip, is involved was well shown in the following case, which came under notice five or six years ago. A woman, aged fifty-five years, had tuberculous disease of her hip-joint, which was, for the first few weeks, considered to be, and was treated as, "sciatica." Afterwards the case was treated with absolute rest, secured by a Thomas's splint and weight extension. The joint, however, grew steadily worse; in four months suppuration occurred, and matter was found both in Scarpa's triangle and under the tensor fasciæ femoris, and later under the glutei. The limb became rotated outwards and shortened, and at last it became clear that the head of the femur and the upper border of the acetabulum had been absorbed, so that the upper end of the femur could be pushed up and pulled down on the

pelvic wall through a range of three inches. Thus this joint within about eight months became a complete wreck. The patient died a few weeks later from phthisis and exhaustion. The best treatment, although it will often be found of little avail, is from the first to place the affected joint at absolute rest; to secure the best conditions for preserving the patient's general health; to open abscesses as they form, with the most rigid precautions against septic changes in the wound; and to resort to amputation when it is found that the progress of the case is in a persistently downward direction. Amputation, if means are taken to prevent hæmorrhage, and if an aseptic condition is maintained, will be perfectly well borne in the case of all the smaller joints and often of the knee. (In the case of the hip, of course, the idea of amputation cannot reasonably be entertained, nor would excision be a proper step.) After amputation has been performed the patient may, as I have several times seen, recover and long maintain perfectly good health. The list of cases of which I have given the foregoing brief account conveys a repetition of Sir James Paget's statement that there are no structures which in the young appear to be "seats of election" of scrofula (or, as would now be said, of tuberculosis) in which the affection is not met with in people over sixty years of age.

Another form of tuberculous disease which is seldom, if at all, referred to in the current manuals of clinical surgery is "subcutaneous ulceration"—a name which, like that of "senile scrofula" (now tuberculosis), we originally owe to Sir James Paget. The nature and course of this affection will be most readily indicated by two or three examples.

CASE 7.—Two months ago a boy, aged nine years, was admitted into St. Bartholomew's Hospital with a sinus on the inner side of his popliteal space and some ill-defined thickening over the neighbourhood of the internal condyle of the femur. These appearances suggested that the case was one of tuberculous disease of the lower end of the femur, attended with suppuration. On passing a probe, however, through the sinus, no bare bone could be detected, and, indeed, it was apparent that the probe nowhere passed through the deep fascia, but that it ran easily in various directions close beneath the skin, which, over the most prominent part of the internal condyle, was scarcely thicker than writing-paper. The probe also passed in the subcutaneous tissue nearly half-way down the leg, and its point moved horizontally through a considerable area, showing that the skin was widely detached. The nature of the case as one of wide undermining of the skin by "subcutaneous ulceration" was now clear. The whole of the undermined area was therefore exposed by free incision of the skin; the flaps thus formed were raised and turned back; the granulation tissue was thoroughly scraped away with a Volkmann's spoon; the wound was dusted with iodoform, and the flaps were replaced and fixed by sutures. Sound healing by primary union occurred except in the immediate neighbourhood of the original sinus. Here an exuberant crop of tuberculous granulation tissue remained, and a second scraping was necessary. Soon afterwards sound healing took place.

CASE 8.—A boy, aged ten years, was admitted some years ago into the Hospital for Sick Children, Great Ormond-street, with three sinuses, three or four inches apart, over the tibia. The orifices of these sinuses were filled with protruding granulation tissue, and their general appearance, together with some swelling of the soft parts, seemed to indicate plainly enough that the case was one of necrosis of the tibia. On proceeding to operate, however, I found that the deep fascia was everywhere intact; but the subcutaneous tissue for some distance around was converted into granulation tissue, so that the skin was completely undermined. In places it was very thin. Free incisions were made, the granulation tissue was scraped away, and the flaps were replaced and sutured. The wound healed in about three weeks.

CASE 9.—A youth, aged eighteen years, was in St. Bartholomew's Hospital two years ago with four sinuses over his occipital region which from their position seemed at first sight to suggest necrosis of the occipital bone. These sinuses had existed for about nine months. On examination it was found that the bone was nowhere exposed and that the sinuses led down merely to the areolar space beneath the occipito-frontalis. The pericranium was quite normal. The probe travelled freely in all directions over a nearly circular area about three inches in diameter. Incisions were made and the scalp over this area was turned up, the granulation tissue was scraped away, and the wound was treated as in the former cases. Healing quickly occurred, and when the patient left the hospital, three weeks later, there remained only three short sinuses which promised to be soundly healed in the course of a week or two.

The explanation of this particular form of tuberculous disease appears to be the following. When the tuberculous process is established in the subcutaneous tissue it extends in a horizontal direction, because the subcutaneous tissue is loose, vascular, and easily invaded, whereas both the skin and the deep fascia, especially the latter, owing to their comparative firmness and toughness, tend to withstand infection. The same fact is illustrated by the ordinary undermining of the skin in superficial tuberculous ulceration. It is illustrated also by the fact that in rodent ulcer the process extends in the subcutaneous tissue further than it does in the skin itself, so that for the complete removal of this disease it is necessary to cut well beyond the limits to which the skin appears to the naked eye to be involved. In fact, in subcutaneous ulceration, as in other instances, the undermining of the skin is due to the fact that the process of infection spreads most readily in the direction of least resistance.

THE PROGNOSIS OF PNEUMOTHORAX, WITH SOME STATISTICS AS TO MORTALITY AND DURATION, AND AN ACCOUNT OF A SERIES OF CASES OF RECOVERY.[1]

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PNEUMOTHORAX is a subject which does not appear to have attracted of recent years as much attention as might have been expected from the importance of the subject. In the Bradshaw Lecture at the Royal College of Physicians of London in 1887 I drew attention to several points of theoretical and clinical interest. The present communication is of a more practical character and deals with the prognosis of the affection. Prognosis is without doubt the most difficult part of clinical medicine, for it not only necessitates profound knowledge of the natural history of the disease and of the general laws to which it is subject, but it requires also the power of appreciating at their true value the peculiar features of the individual case and of determining the extent to which the general laws must be modified to suit the particular instance. I must premise that in this paper I am dealing only with the cases which are ordinarily indicated by the term "pneumothorax" and not with cases in which the air has gained access to the pleura through a large opening in the chest walls produced by operation or injury. Before approaching the question of prognosis in pneumothorax it is necessary to refer to what is known as the general course of the disease so far as it is indicated by its mortality and duration. Upon this subject my observations are drawn from three sources: (1) a series of 101 cases from the records of the Chest Hospital, Victoria-park, published by me some years ago; (2) a series of 45 cases taken from the registers of St. Bartholomew's Hospital; and (3) a series of 21 cases which have been under my own personal observation. These last two series have not yet been published. Of the first series of 101 cases 66 died, giving, roughly speaking, a mortality of 2 out of 3; but of these 101 cases in 74 the pneumothorax developed in the hospital, of which 57 died—i.e., 77 per cent.; while of the 27 cases of pneumothorax which were admitted into the hospital with pneumothorax only 9 died—i.e., 33 per cent. The difference between the two sets of figures is to be explained by the fact that the mortality from pneumothorax is greatest in the first few days which follow the onset, while the latter group of cases consists entirely of those who had survived this period for varied lengths of time. The rate, therefore, given by the first group probably approaches more nearly to the true mortality of the

[1] A paper read before the Medical Society of London on Jan. 11th, 1897.

disease than the other. In the second series of 43 cases 26 died, giving a rate of 60 per cent., and this is also the rate yielded by the third series of 20 cases under my own care. We may conclude, therefore, that the general mortality of pneumothorax ranges somewhere about 70 per cent.—i.e., rather more than 2 cases out of 3 die. Saussier's figures give a much higher rate—viz., 131 out of 147, or about 90 per cent.

Duration.—In the first series of 101 cases the duration is known exactly in 39 and approximately in 37 others. Of the cases in this latter group the pneumothorax occurred in 10 patients during their stay in the hospital; but the patients recovered sufficiently to leave, so that the terminus *ad quem* is not fixed. In the 27 other cases the patients were admitted with it, and in many of these the terminus *a quo*—i.e., the date of onset—was not quite certain. Altogether pneumothorax occurred 74 times in patients while they were in the hospital, and in these cases the duration is known in 31 exactly and very nearly in 8 more; while in the remainder all that can be said is that the disease did not last less than a certain time—that is to say, the length of the stay in the hospital.

Table showing duration in 76 cases—39 known, 37 approximate.

Months.	Weeks.	Days.	Duration known (39 cases).		Approximate duration (37 cases). Admitted with pneumothorax. Died.	Admitted with pneumothorax. Left with it.	Developed pneumothorax in hospital and died.	Total 76 died.
		1	10					
		2	3					
		3		18				
	1	4	4		—	—	4	
		5						
		6	1	+8				45=60%
1		7						
	2		3		—	—	1	
	3		2	=8	—	—	2	
	4		4		2	—	1	
	5	—	—		—	—	—	
	6	—	1		5	8	—	
2	7	—	—		—	—	—	
	8	—	—		—	—	—	9=71%
	9	—	1		1	1	1	
3	—	—	—		1	7	1	
4	—	—	1		—	—	—	
5	—	—	1		—	1	—	
9	—	—	—		—	1	—	

Of the 39 cases in which the duration is known 10 patients died on the first day, 2 within twenty minutes and thirty minutes respectively of the attack, and the other 8 within a few hours. In all, 18 had died by the end of the first week and 21 by the end of the fortnight, to which may be added 8 more cases in which the duration cannot be quite determined, though it was certainly less than fourteen days, making thus 29 out of 39 cases which were fatal within the fortnight—nearly 75 per cent.; in other words, 3 out of every 4 cases. Six more died within the second fortnight, making thus 35 deaths out of 39 cases within the month, or 90 per cent.—a figure which exactly agrees with Saussier's statistics already referred to. I believe these statistics are too high for the results of the present day, as will be seen when I refer to the more recent series of my own personal cases. Of the remaining 10 per cent., or whatever the exact figure may be—i.e., of those patients who did not die within the month—the duration was considerably longer, many weeks, occasionally many months, and some patients recovered completely. Of the 35 cases in which the duration was uncertain 9 were admitted with pneumothorax and died in the hospital, 10 developed pneumothorax in the hospital and left at varying dates after the attack, some of whom were known to have died subsequently at their own homes, while 18 patients were admitted with pneumothorax and left with it. Of this second group, taking all the cases together, 10 died within the first month, 8 more within the second, and 2 more within the third, making 19 in all. Taking the 2 series together, of 74 cases 45 died within the month—i.e., 60 per cent.; 9 more died within the second month, making 71 per cent. Of the remainder the duration may be much longer and some may recover; 7 were known to be alive at the end of the third month, 1 at the end of the fifth, and 1 at the end of the ninth. Of the 20 cases which were under my own care, 12 only died and 8 recovered, giving a mortality of 60 per cent, which is exactly that which the records of St. Bartholomew's Hospital for the last fourteen years also yield.

The cause of death.—The real mortality from pneumothorax is difficult to arrive at, for it often happens that the patient gets over the pneumothorax, possibly even recovers completely from it, and yet dies before long either from the diseases which caused the pneumothorax or from the results to which the pneumothorax indirectly led. The causes of death must be dealt with in three groups: the first, in which death is the direct result of the pneumothorax itself; the second, in which it is the indirect result of it and due to the complications which follow—e.g., empyema; the third, where it is the result of the original disease—e.g., phthisis—to which the pneumothorax itself was due, the pneumothorax being at the most but a more or less serious complication, accelerating possibly the end, though not itself entirely responsible for the result.

1. The great majority of the fatal cases of pneumothorax die, as already stated, within the first few days of the disease; nearly one-half—46 per cent.—die within the first week. Of the cases that were fatal during the first fortnight, no less than one-third died on the first day, two within twenty and thirty minutes respectively of the onset of the disease, and the majority of the others within a few hours. Where death is the direct result of pneumothorax the cause of death is suffocation. This is due in most cases to the sudden embarrassment of the respiration and circulation consequent upon the disease, and it is not so much the amount of change as the suddenness of it that is the cause of the grave symptoms, so that if time be given for the circulation and respiration to adjust itself the urgency of the symptoms may pass off, and thus it may be stated that every hour the patient keeps alive the better the chances are of his passing safely through the initial dangers. Another and different cause of suffocation, mechanical rather than physiological, lies in the sudden discharge of the contents of cavities into the air-tubes which get sucked into the remaining lung and thus choke the patient. I have seen this occur more than once. Lastly, there is a class of case in which death may be called sudden or immediate and may be referred to shock. This is very rare and I have never seen an instance of it myself. Lebert describes a case in a young medical man of the age of twenty-eight years. Of the two cases in which the patient died within twenty minutes and thirty minutes respectively of the onset of the disease the cause of death in each was acute suffocation and not shock. The initial dangers can, no doubt, be greatly diminished by the early recognition of the disease and its appropriate treatment, and it is probable that the diminished mortality of pneumothorax in recent years is due to improved diagnosis and treatment.

2. Where death follows at a later period it is often the result of the effusion consequent on the pneumothorax. The effusions are, roughly speaking, serous in one-third of the cases, sero-purulent in another third, and purulent in the remaining third; where the effusion is purulent, sooner or later the side has to be opened, either because the empyema points or discharges itself or because it is deliberately incised. The condition then becomes one of an open empyema, and under unusually unfavourable conditions, for, owing to the prevailing prejudice against early incision in pneumothorax, the lung has been probably bound down and cannot consequently expand, and, secondly, because of the complication of the effusion with more or less extensive tuberculous disease of the lung. Any way, the patients die usually from asthenia, the result partly of the prolonged discharge and partly of the phthisis.

3. In the third group of cases it is not from pneumothorax that the patient dies, but from the original disease which produced the pneumothorax. This is usually phthisis. In

many of these cases the pneumothorax is nothing more than a more or less grave complication, which may accelerate the end, though it is not of itself the cause of death. In other cases, though the patient is dying actually from phthisis, the pneumothorax which has been produced may get well completely.

Prognosis.—In dealing with prognosis we must presume that we have a case of complete and not of partial pneumothorax to deal with, for localised pneumothorax is comparatively an unimportant affection. Also, that when pneumothorax results from the discharge of an empyema through the lung or externally through the chest walls the prognosis is that of empyema and not of pneumothorax, and therefore relatively more favourable. The three considerations usually embraced by the common term "prognosis" require, in a case of pneumothorax, to be separately dealt with. They are, first, the immediate risk to life; secondly, the possible duration of life; and, thirdly, the chance of ultimate recovery. Many of these points have been already incidentally referred to in treating of the mortality and duration of the disease.

1. *As regards the immediate risk to life.*—This is always great, and greatest during the early hours and days of the disease, as has been already shown, so that, speaking generally, other things being equal, the chances of life increase in proportion to the period which elapses from the onset; but in any given case the actual prognosis at the time must be determined by many other considerations, of which the following are the most important. (*a*) The urgency of the symptoms; (*b*) the effect produced upon the opposite lung and the amount of previous disease in it; (*c*) the effect upon the heart; (*d*) the general strength of the patient; and (*e*) the nature of the cause—e.g., injury, phthisis, gangrene of the lung, &c.

a. The urgency of the symptoms. This is measured practically by the amount of dyspnœa and cyanosis, which is often so extreme that unless relief can be given the patient must die. The greater the relief given by paracentesis, and the longer the interval between successive paracenteses, the better the immediate prognosis.

b. The condition of the opposite lung. This lung, being overworked, may not be equal to the strain upon it, and if it gives way the physical signs of congestion (i.e., of bronchitis) will manifest themselves. Thus it is that rhonchus and sibilus become signs of very bad omen. The amount of previous disease in the lung is important, inasmuch as the lung is rendered thereby less able to meet the extra demands made upon it.

c. The effect upon the heart; for the difficulty of circulation throws extra work upon the right side of the heart, and if this exceeds a certain amount dilatation and its consequences will be the result—a result which will be the more likely to follow if the heart be previously diseased.

d. The general strength of the patient. This is important in two respects: first, in so far as it affects the muscular power, for this is taxed, on the one hand, in the respiratory muscles, which have so much extra work to do, and, on the other hand, in the heart, which in a weakly patient is all the more likely to give way rapidly; secondly, in so far as it affects the general stamina and powers of endurance of the patient.

e. Lastly, a good deal will turn upon the disease which has led to the pneumothorax. In the vast majority of cases this is phthisis, and this class of case may be taken to represent the average. As giving a prognosis better than the average may be instanced cases of pneumothorax following simple injury, such as a stab or a fractured rib, and as giving a still worse prognosis, cases of gangrene of the lung, for these are almost invariably fatal.

2. *As regards the duration of life.*—If the urgent initial symptoms have passed off the prognosis will depend upon the general strength of the patient and upon the nature of the disease with which the pneumothorax is associated, but principally upon the complications to which the pneumothorax may lead—i.e., upon the occurrence of effusion and its character.

3. *As regards recovery.*—Speaking generally, the number of recoveries in pneumothorax is small. Most statistics give a more or less complete recovery in not more than 10 per cent. The figures derived from the St. Bartholomew's records yield over 25 per cent., and my own cases are even more favourable still. In my own 20 cases 5 recovered completely and remained well for long periods; in 3 the recovery from pneumothorax was complete, but the patient died subsequently from phthisis, and in 3 others recovery was incomplete. Besides these I have seen 1 other case in consultation in which recovery was complete, and the patient has remained well for many years. The most favourable cases are those in which no effusion takes place. The air is then simply absorbed, and often with considerable rapidity. Of this there were 4 instances, and to these may be added the consultation case referred to. In another group of cases effusion forms, but it is serous, and recovery then takes place with or without paracentesis, just as it does after ordinary serous effusion. Sometimes the fluid, after being removed by paracentesis, does not re-form, but the air remains for some time longer, though it is ultimately absorbed also. In other cases the air is absorbed first, fluid takes its place, the case becomes one of ordinary serous effusion, and recovers in the same way. When the effusion is purulent the prognosis is much more serious, but even some of these cases in time recover. In one of my cases expectoration took place through the lung, and in the end the patient recovered completely. In one other the pus was discharged externally and recovery was imperfect, the patient being left with a discharging sinus for more than twelve months, by which time extensive phthisis had developed from which the patient soon after died.

I now pass to the account of the cases of recovery, which number 11. In 5 no effusion formed; 1 was dying from phthisis; 1 had phthisis, but was living some months after recovery; in the others no definite signs of phthisis developed. In 4 there was serous or sero-purulent effusion; of these four 1 was under the tuberculin treatment for phthisis at the time, and had two attacks at a short interval on the same side, but gave no definite signs of phthisis; 1 had a second attack on the other side six months after recovery from the first; 1 got completely well; the fourth left with the effusion, having refused operation. Of the 2 cases with purulent effusion, 1 recovered with a fistula, but died from phthisis twelve months later. The other expectorated pus for some time, but refused operation.

CASES OF RECOVERY.

A.—Without Effusion of Fluid.

CASE 1. *Acute phthisis; pneumothorax of the left side developing in the hospital; complete recovery in five weeks; rapid progress in the phthisis, and death subsequently at home from phthisis.*—The patient, a woman aged nineteen years, was admitted into the Chest Hospital, Victoria-park, with acute phthisis of the right apex and with some early mischief on the left side also. The disease was probably of about three months' duration. Six weeks after her admission (April 7th) she was seized one morning with pain in the left side and some shortness of breath. The symptoms were not very urgent, but she was found on examination to have pneumothorax of the left side with considerable displacement of organs. No fluid formed, the air was absorbed, though somewhat slowly, and by May 14th (i.e., five weeks from the onset) the two layers of the pleura were in contact in most places and dry friction was heard, and by the end of the month (i.e., seven weeks from the onset) the condition of the side was the same as before the pneumothorax, the heart's apex was in its normal place, and over it a well-marked pleuro-pericardial friction was present, which persisted for a short time and then also disappeared. The lung re-expanded completely, and nothing was left but a little impairment of percussion at the base behind. There had been no evidence at any time of fluid and succussion had been entirely absent. The temperature was hectic throughout, and was completely unaffected by the occurrence of pneumothorax. On July 10th she left the hospital at her friends' request—i.e., about twelve weeks after the onset of the pneumothorax. The phthisis had all the time been making very rapid progress, and a few weeks later caused the patient's death.

CASE 2. *Pneumothorax of the left side, without definite symptoms at the time of onset, without effusion, and complete recovery.*—A man, aged forty-six years, was sent up to me by Dr. Parry-Jones. About six weeks before admission he was at work and felt a pain in the left side, which made his breath somewhat short. The dyspnœa was not severe, so that he was able to continue his work, and he remained at work until shortly before I saw him, and with no special discomfort, except that he found his breath a little shorter than usual on effort. For this he consulted Dr. Parry-Jones, who found that the patient had pneumothorax, and sent him up to the hospital to me, although the man did not think himself ill enough

to be placed upon the sick list. The whole of the left side was tympanitic to percussion almost to the very margin of the ribs; the heart was displaced, so that impulse was felt below the right nipple, and the pleura extended one and a half inches to the right of the sternum opposite the third rib. There was no bell sound or succussion; the breath sounds were absent everywhere except in the interscapular space and a little below this, and here the breathing was exaggerated and some metallic tinkling heard. The movements of the side were quite free. I made the following note at this time: the patient had pneumothorax of the left side; the amphoric breathing and metallic tinkling were probably produced in the lung, but the opening was itself closed; the free movements of the side indicated that the lung was not bound down, but expanded readily on inspiration. On Sept. 3rd the patient was quite well, the air was completely absorbed, and the lung re-expanded. The following note was then taken: the percussion was equal on the two sides, the cardiac dulness was in its normal place, the stomach resonance was a little higher than usual, and over a small spot at the base behind there was probably a little pleurisy, for the percussion was slightly impaired, the breath sounds were feeble, and some fine crepitation—probably pleuritic friction—was heard on deep inspiration; i.e., except for this the voice and breath sounds were normal over the whole side. The patient gained 14 lb. in weight in the hospital, and looked and felt quite well. Once or twice during his stay he had a little hæmoptysis, from which he had suffered occasionally before his attack. Dr. Parry-Jones has been kind enough to send me the following report of him this year, ten years since his attack of pneumothorax: "I find the patient has been at work ever since 1886 and has had no illness. He appears to be now in good health and his chest is in every way normal. I hear, however, from a doctor who saw him a few weeks ago that he had then a very slight attack of pleurisy on the left side, but of this there is no sign now.

CASE 3. *A man under treatment for possible phthisis who developed right pneumothorax; complete recovery in six weeks; well twelve months afterwards.*—The patient, a man, aged twenty-four years, had been under observation for some time suffering, it was supposed, from phthisis, of which, however, there were no definite physical signs. On Nov. 7th he was suddenly seized with severe pain on the right side with much dyspnœa. He was taken to the Royal Hospital for Diseases of the Chest, where Dr. Hensley drew off a large quantity of air next day by means of the aspirator. The patient left that hospital and came under my care four days later. The dyspnœa had disappeared, but the physical signs of pneumothorax were obvious. There was no distension of the side to sight or touch, but there was a good deal of subcutaneous emphysema which had followed the paracentesis. The heart was displaced, so that the apex beat was felt one inch outside the left nipple line; there were loud bell sounds and amphoric breathing over the whole side; succussion was absent. On the 15th the physical signs were the same; the bell sounds and amphoric breathing were well marked. On the 20th the physical signs were unaltered, but the apex of the heart had returned to the nipple line. On Dec. 9th the bell sounds had disappeared and did not subsequently return; the amphoric sounds were very weak, and the heart's apex was within the nipple line. On the 20th the right side seemed to be a little flatter and to move somewhat less than the left, but otherwise to be normal; the amphoric breathing had also disappeared and natural breathing was heard over the whole side, back, and front, while the apex of the heart was in its normal place. Thus within six weeks the air had been completely absorbed and the lung had re-expanded. The patient seemed perfectly well and was discharged. He was often seen subsequently, and though troubled from time to time with cough remained in better health than usual, and, indeed, gained flesh. With the exception of a little streaky hæmoptysis five months after his discharge he remained perfectly well, and was known to be in good health more than a year after the occurrence of the pneumothorax.

CASE 4. *Pneumothorax of the right side, probably the third attack; no fluid; complete recovery.*—The patient, a man, aged twenty-two years, was delicate as a boy and was subject to cough, but of recent years had grown stronger, and is now fairly active and strong. He was in his usual health until August, when, whilst walking, he had a sudden attack of pain just above the right clavicle and felt a bubbling sensation in the right side and the breath suddenly became short. After this he noticed that he had a "churchyard cough," but though he was able to keep to his work he was obliged to avoid all violent exercise for about a fortnight, when he got quite well. In the beginning of November—that is to say, four months later—after a game of football in which he was on more than one occasion heavily charged, he became again short of breath. This lasted about a month, but in the end he again got perfectly well. He remained well until just before Christmas (Dec. 23rd), when suddenly, after getting up in the morning, the shortness of breath again appeared and continued so until his admission into the hospital on Jan. 4th. He was then found to have pneumothorax of the right side. The chest was fairly well developed, but was a little flat in the upper part; the heart's apex was in the left nipple line, but the pleuritic hyper-resonance extended across the sternum for nearly an inch to the left. On the right side the breathing was amphoric in character, but no bell sound was obtained and no succussion. The liver dulness was at the lower edge of the seventh rib, so that the tympanitic percussion did not extend exactly to the costal arch. The diagnosis made was that the patient had had pneumothorax and that the air had been partly absorbed. He presented no symptoms; the temperature was normal and he seemed well, so that on the 17th he was allowed to get up, and on the 24th was up all day. He could get about without any shortness of breath and the physical signs were not much altered. On Feb. 5th it was noted that the shape of the chest was symmetrical; movements were free, but there was a little more expansion on the left side than the right on deep inspiration; the liver stood at the sixth rib in the nipple line on the right side; cardiac dulness was normal in place and size; the percussion note was still a little hyper-resonant on the right side, the left was normal; the breath sounds were vesicular and audible down to the base, though a little more distinct at the apex than elsewhere; a little fine crepitation in the mid-axillary line was heard when some pain had been complained of. The patient was seen many times subsequently and was known to be in excellent health for many months, when he became lost to observation.

CASE 5. *Pneumothorax in an apparently healthy girl; no effusion; complete recovery.*—This was a case seen in consultation and is not included in my series. The following account of the case was sent to me by Dr. Waldo of Clifton, Bristol: "The patient, a girl, aged fifteen years, thought she felt something give way in her right side when dancing. She was first seen by me on Aug. 14th, 1890, when she complained of a sharp pain under the right collar-bone. The heart's apex was half an inch outside the nipple line on the left side, and there were the ordinary signs of pneumothorax, but no succussion. Shortly afterwards you saw her and recommended that she should stay in bed for many weeks. I have a note that on Oct. 6th, 1890, the heart's apex was in its normal position and the respiratory murmuring equally good on each side. The patient had never spat any blood and there were no signs of tubercle. Her weight was 6 st. 4 lb. I have seen the patient only a few times since, as far as I can recollect, and I have every reason to think that the patient is still in good health."

I recorded one of the cases just described (Case 3) in the Transactions of the Clinical Society of 1884, and I collated a series of 24 cases of this kind,[2] nearly all in males. The majority of these cases made a rapid recovery; some were well in a few days, others in a few weeks; the longest took eleven weeks. The probable cause was specified in 18; 4 were due to phthisis certainly and 4 more probably, 3 were attributed to emphysema, 2 followed over-exertion in previously strong, healthy persons, and 3 were traumatic. In 4 only was mention made of evacuation of air by puncture.

(To be continued.)

[2] Cf. also Gaillard, Archives Générales de Médecine, 1888, p. 286, with many of the same cases recorded.

THE BATH ROYAL MINERAL WATER HOSPITAL.—The annual meeting of the governors of this hospital was held on May 1st. The report stated that 1263 patients had been treated in the institution during 1896 and that the daily average in the hospital was 142, their average stay being 47½ days each. Fifty-two of the patients were cured and 959 greatly benefited. General Mainwaring was again elected president.

SKIAGRAM OF THORACIC ANEURYSM.[1]

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AND
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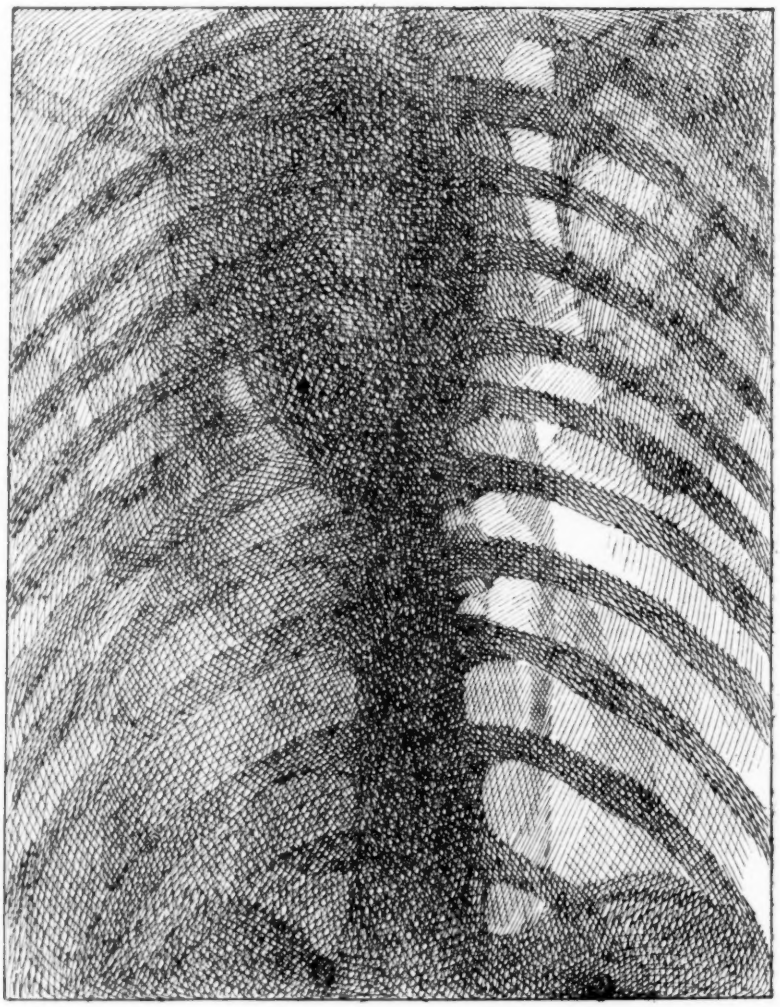
ON Jan. 6th of this year Dr. Edmond sent to the Electrical Department, from his wards in the Aberdeen Royal Infirmary, a patient whom he suspected to be suffering from an aortic aneurysm, with the request that a skiagram should be taken in order to confirm, if possible, the diagnosis. On examining the patient by means of the fluoroscope, the shadow of the heart at its upper part was seen distinctly to encroach on the clear area of the right lung. This encroachment had a curved border, with its convexity towards the patient's right. Having observed this abnormality, and being unaware that any successful skiagram of a thoracic aneurysm had been reported, we proceeded to skiagraph the patient's thorax in the manner to be subsequently described. For the following short notes of the case we are indebted to Dr. Edmond.

"The patient was a married man, aged forty-four years. There was nothing of special interest in either his family or personal history. He denied having had any specific disease, but acknowledged to alcoholic excess. He stated that about two months previously to his admission on October 27th, 1896, to the Aberdeen Royal Infirmary he began to suffer from cough and pain in the chest and neck. He lost flesh and strength, and was obliged to cease work and to apply for admission to the infirmary. On admission he complained of cough with scanty expectoration, pain across the chest about the level of the third ribs, shooting into the neck and arms, and shortness of breath on exertion. On inspection his chest appeared to be barrel-shaped, with expansion deficient, particularly on the left side. There was no bulging anywhere visible, and no undue pulsation visible or palpable, either in the chest or neck. On percussion

FIG. 1.



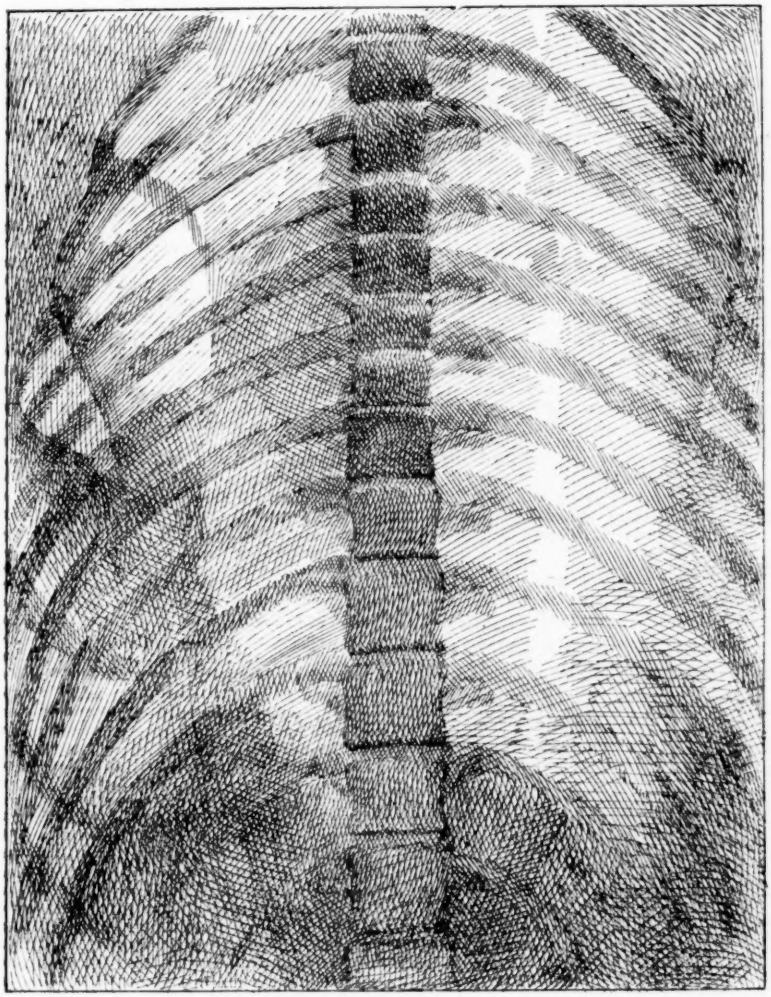
Drawing from skiagram of abnormal thorax. The shadow of the aneurysm is seen lying in front of the spine and extending from the base of the second to the seventh dorsal vertebræ and head of the seventh rib.

[1] Exhibited before the Aberdeen Medico-Chirurgical Society.

the note was found to be hyper-resonant over the whole of the front and back of the right side, and rather flat over the corresponding parts of the left. Over the manubrium sterni and extending to the left there was a slightly dull note. On auscultation the breath sounds over the front and back of the right side were loud and harsh, with prolonged expiratory murmur. Over the front and back of the left side the breath sounds were all but extinguished. A few dry rhonchi were heard on the right side. His voice was hoarse and his cough had a distinctly laryngeal tone. The heart's impulse was feeble to palpation and not visible. The area of cardiac dulness was about normal. At the apex the heart's sounds were feeble and free from murmur. At the base, in the pulmonary area, they were scarcely audible; in the aortic area they were abnormally loud, particularly the second, which was markedly accentuated. The pupils were equal in size and reacted freely to light. The left radial pulse was weaker than the right. There was well-marked tracheal tugging. His larynx was examined by Dr. McKenzie Booth, who reported paralysis of the left vocal cord. During his stay in hospital he was treated with large doses of iodide of potash and left somewhat improved. We heard that he died on Jan. 16th, 1897, some weeks afterwards, from lung complications, but found it quite impossible to obtain the permission of the relatives for a post-mortem examination."

The skiagram of the aortic aneurysm was taken while the patient lay on his back upon a 20 × 16 in. professional Cadett plate. The ordinary focus-tube was used at a distance of fifteen inches from the plate and an exposure of thirty-five minutes was given. The 8-inch spark Rhumkorff coil was actuated by five E. P. S. accumulators of about two volts each. On examining the skiagram of the suspected aneurysm the curved shadow on the clear area of the right lung, observed by means of the fluoroscope, is at once seen, along with a larger extension of the same shadow to the left, this latter part of the shadow merging gradually into the normal shadow of the heart. The abnormal shadow is seen to lie in the upper part of the chest, in front of the spine, and extends from the base of the second to the lower part of the seventh dorsal vertebra (Fig. 1). On the right side the gradual curve is seen vividly against the clear lung, commencing at the articulation of the third rib with the spine, curving outwards to a point two and seven-sixteenths inches from the mid-spine, and then inwards to its lower limit at the spinal articulation of the eighth rib.

FIG. 2.



Drawing from skiagram of a normal thorax for comparison.

A darker shadow lies half an inch inside this outline and follows the same shape of curve. On the left side the lower limit of the shadow is the same as on the right, but its curve is greater, extending to a point three inches from the mid-spine. The upper limit of the curve is lost at a point two and three-quarter inches from the mid-spine opposite the base of the second dorsal vertebra. On the right side the inferior angle of the scapula is well seen between the seventh and eighth ribs, four and a half inches from the mid-spine. The spine of the scapula is seen running from between the third and fourth ribs upwards and outwards towards the shoulder-joint. On this side, also, the lung space is much clearer and the interspaces between the ribs wider than on the left. On the left side the heart shadow (though indistinct, as the patient was lying on his back) is seen extending from the point of maximum curve of the abnormal shadow downwards and outwards to the tenth rib. On this side it is interesting to note that the lung space is much duller in appearance and the interspaces between the ribs narrower, because during life physical examination proved that breath-sounds were almost absent in this lung. The spine and inferior angle of the left scapula can also be seen. The shoulder articulations and shafts of both humeri are visible. The front curvatures of some of the ribs on both sides also appear as large ill-defined shadows, crossing the lung space at right angles to the direction of the ribs at the back. The upper surface of the liver appears very distinctly on the right side. For purposes of comparison a normal thorax of about the same dimensions as the one with the aneurysm was skiagraphed under precisely similar conditions, and the points of interest in it are as follows.

Normal Thorax.—In the upper part of the skiagram no shadow is seen on the right side, nor on the left above the level of the fifth dorsal vertebra (Fig. 2). In these regions the lungs are equally clear on both sides, and the interspaces between the ribs equal in size. The indistinct shadow of the heart is seen on the left, extending from the upper part of the fifth dorsal vertebra downwards and outwards in almost a straight line to a point about five inches from the mid-spine on a level with the lower part of the tenth dorsal vertebra. A darker shadow is visible, leaving the former one at the sixth rib, with a curve which forms its lower border, and reaches to the middle of the eighth dorsal vertebra. This darker shadow is probably the base of the heart. In this skiagram also the spines and inferior angles of the scapulæ are visible.

A CASE OF INJURY TO THE SHOULDER FROM THE SCHULTZE METHOD OF ARTIFICIAL RESPIRATION.

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ASPHYXIA neonatorum is generally treated in Germany by the Schultze method of artificial respiration, which is not in such common use in this country; but it is taught and practised at the Rotunda Hospital, Dublin, and from experience there and subsequently I regard the method as prompt and effective.

The case I now record of injury to the shoulder from the Schultze method is perhaps unique; but it shows the possibility of accident and the necessity for most careful manipulation. The facts are as follow: The child was born at the "klinik" of a celebrated obstetrician in a German city, near which the mother—an Englishwoman—was staying. She was, however, attended by his assistant, also a specialist of high repute. It was fortunate that she was in such good hands; it proved a prolonged and difficult instrumental case, the child, a boy weighing 11 lb. Artificial respiration was necessary; the Schultze method was used and it revived the child. For forty-eight hours he was continuously fretful, and neither slept nor took the breast. There was no explanation of this fretfulness until extensive ecchymosis behind the left shoulder and in the axilla drew attention to the arm, which hung limp and flaccid. When the mother and child left the "klinik" after the usual interval, the arm still hung loosely from the shoulder, and the infant had shown no disposition to use it. Careful examinations had revealed no fracture, dislocation, or other radical injury, and it was believed that nothing existed which time would not remedy. Unfortunately, these hopes were not fulfilled. At three months old the child could make some limited movements with the arm and weak, awkward efforts with the hand, but rigidity at the shoulder-joint had supervened on the primary flaccid limpness. During the seven months following the child's birth the parents were travelling, and after leaving the "klinik" had only once had an opportunity of getting professional opinion about the arm. The child was then four months old, and they were becoming very uneasy; but a medical man, after superficially observing the child without having him unclothed, again lulled their anxiety by treating the matter lightly, and repeating the hope that all would come right with time. They were but too pleased to accept this opinion, particularly as the boy was the long-desired successor to five daughters and remarkably fine and healthy withal. When he was seven months old they had again become so dissatisfied that they had determined, by a friend's advice, to go to London for Mr. Pearce Gould's opinion. They had then come to Brighton, and a brief postponement was caused by severe illness in the family. The baby was eight months old when the mother one day asked me to tell her what I thought of his left arm. While I engaged his right hand he eagerly clutched at my proffered pencil-case with his left hand and arm in a most unnatural position. It was very evident that there was something radically amiss, and the next day I made a careful examination with the child stripped. On inspection from the front the following points were noticed. The whole arm was strongly rotated inwards, adducted, and drawn forwards. So constant was this position that the skin in front of the axilla was folded into a permanent, deep sulcus. Compared with the right the left deltoid was very flat and deficient, likewise the biceps. Inspection behind showed the humeral head and scapular spine unduly prominent, owing to the deficient size of those muscles, which normally make these bony prominences indistinct. The triceps was also undersized. The forearm muscles were not so noticeably undeveloped, and measurements proved the humerus to be only slightly shorter than its fellow. Examination showed that the relations of bony points about the shoulder and elbow were normal, with the exception that the head of the humerus was, perhaps, slightly tilted back towards the posterior lip of the glenoid cavity. The tendon of the pectoralis major was large, tense, and contracted, and kept the arm powerfully rotated inwards, adducted, and drawn across the chest. Attempts to overcome it were futile and caused immediate suffering. When by engaging the sound arm the child was induced to grasp with the other at any attractive article he habitually flexed and internally rotated the arm more excessively, and by bringing the forearm pronators into extreme action carried the little finger and the ring finger uppermost and grasped with them only. These two fingers were well developed, whereas the unused other three were comparatively small. By my advice Mr. Pearce Gould was at once consulted. He concluded from the history, with the important fact of the primary extensive ecchymosis behind the shoulder and in the axilla, and from the condition he found—great wasting of the muscles in the infra-spinous fossa of the scapula, with thickening at the back of the upper end of the humerus—that the infra-spinatus and teres minor muscles had been ruptured when the Schultze method was used, and that the deformity had been gradually produced by the unopposed and naturally stronger internal rotators, the pectoralis major in particular. He advised the breaking down of adhesions and the stretching of contracted tendons by free movements under chloroform, to be followed by massage, movements, and electricity. In a few days' time I administered chloroform, and Mr. Pearce Gould thoroughly carried out these operations and fixed the arm in extreme external rotation by means of broad strapping passed round the limb and then round the chest. On the four consecutive days I repeated the free movements and re-strapped the limb, with the child anæsthetised. The operation then became easier and less painful, and anæsthesia was dispensed with. Mr. Pearce Gould had not given a very favourable prognosis, but yet held out hopes of substantial improvement should after treatment be persistent and thorough. Fortunately, the parents were reasonable and sensible, and they realised that eight months' inaction was only to be counterbalanced by a much longer period of patient, continuous effort. In a week from the primary

operation I commenced Faradaisation, continuing it on alternate days, in addition to the free movements; the aim was to develop the remains of the injured external rotators with other muscles which might be compensatory and to improve innervation. I picked out the deltoid in particular, the trapezius, rhomboids, &c., also the triceps; and to counteract the constant tendency of the forearm to pronation I tried to increase the development of the supinators longus and brevis, and by inducing strong contractions of the biceps with the forearm flexed to improve its action as a supinator; the radial extensors of the carpus, longior and brevior, were also treated. Rapid increase in the size of all these muscles, with quickened response to stimulus, gave encouragement, and very soon operations were extended with the small button electrode to the small muscles of the undersized thumb, index, and middle fingers, and to the palmar surface of their tips to improve tactile sensibility, with palpable benefit. Sometimes one pole was placed over a muscle and the other over the brachial plexus in the posterior triangle or over the individual nerve supply, and sometimes both poles were placed over either end of one of the longer arm muscles. Frequent intermissions were given to avoid overtiring a muscle. After a month other factors equally as effectual and important helped in the improvement. Nearly all day now the child had his good arm enveloped by a towel tied round his body; he also had a thick stall on the little and ring fingers of the other hand to prevent his customary exclusive use of them. His mother's devotion to a set purpose and her intelligent supervision were now invaluable; she daily gave all her spare time to the various amusements and devices we designed to teach the child external rotation, abduction, supination, and the use of his unaccustomed fingers; it became quite a matter of habit with all the family to discourage the tendency of the limb to internal rotation and pronation; the happy disposition of the child helped us greatly. At the end of two months there was such evident improvement in every way that our task daily grew in interest and lost all tediousness; we began to cultivate the deficient finer movements and sense of touch in the underdeveloped left thumb, index, and middle fingers; with the finger-stall over the other two he was attracted to hold and pick up things. At first he was so awkward and feeble that it was a most difficult matter to get him to take up large lumps of sugar and drop them into a basin, but before many weeks he could confidently pick up such difficult things as pills, small buttons, and safety-pins, coins, &c., with forefinger and thumb opposed in a strong and natural grasp. With his sound arm tied up he now played for hours daily with a variety of articles and with vastly improved method; he was also regularly enticed to reach out after things put round him in different positions, to lift up and take things down from places above him. At the end of four months the regular Faradaisation and free movements—which were now quite painless and easy—with the persistent education of the limb, had effected improvement beyond our hopes. The humerus was very slightly shorter on the one side, but comparison revealed no differences in the muscles now. Force of habit and larger development of the internal rotators always had a tendency to reassert themselves, but the child was now rapidly learning to counteract them by the better use of his improved external rotatory mechanism, which would, however, probably be always weak. At the end of five months we thought our results interesting enough for Mr. Pearce Gould to see, and by his desire the child, now thirteen months old, was taken up to the Middlesex Hospital and shown to his class. It was an interesting case for his hearers, and gave him an object lesson to impress on them that the Schultze method of artificial respiration requires all possible gentleness. Subsequently the little patient went to Germany for a few months. Faradaisation was now almost superfluous, but a battery was taken for occasional use, which the parents could competently manage themselves.

The child was taken recently to see the famous German surgeon, Professor Kraske of Freiburg. I gave him a brief history from the commencement and a statement of the treatment; he has sent me a letter written by a colleague at his request from which the following is an extract. "Besides symptoms pointing to what we call 'Erb's paralysis'—lesion of the fifth and sixth cervical roots above the clavicle—Professor Kraske found the growth of the left humerus impaired, which he was inclined to attribute to traumatic lesion of the upper epiphysis. As to the ultimate result of treatment, Professor Kraske did not feel entitled to express any definite opinion. Since the nervous disturbance had gradually been giving way he considered further improvement very probable." Professor Kraske also says he advised the application of a bandage, which will, while it is worn, fix the humerus in a normal position and prevent its inward rotation. Seven months of treatment had so altered the condition of affairs when Professor Kraske saw the child that it was very difficult for him to realise fully the nature of the primary lesion and the true characters of the resulting deformity. Interesting as his views were, his prognosis was of far more practical importance, and was fully justified, for I now hear that since the intermittent use of Professor Kraske's bandage improvement has been even more rapid than before.

Although I anticipate ultimate success in extent greatly beyond what has been attained, I think the treatment has gone far enough and been successful enough to make the case instructive and to point the moral that in cases of this nature one need not despair of improvement; in fact, in an apparently hopeless instance the commencement of treatment may justify a prognosis which amply repays us for the experiment and encourages us to persevere.

Brighton.

A CASE OF RUPTURE OF THE LIVER SUCCESSFULLY TREATED BY ABDOMINAL SECTION.

BY CHRISTOPHER MARTIN, M.B. EDIN., F.R.C.S. ENG.,
SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.

IN the early part of the afternoon of May 4th, 1896, a strong, healthy young coal miner, aged nineteen years, was caught, whilst down in the pit, between two sets of trucks and received a severe "rolling crush." He was carried to the surface and sent home in a cart, and Mr. J. M. McCarthy, of St. George's, Salop, was sent for. When he saw him, about 4 P.M., the patient had recovered from the first shock. He complained of great pain in the right side of the chest. There were signs of bruising both on the front and back of the chest, especially on the right side. His pulse was 76, his temperature 98° F., and there was nothing then in his general condition to point to any grave internal injury. In the evening he seemed to be better, and he slept during the night till 5 A.M. Next morning (the 5th) he was, however, decidedly worse, and as the day wore on well-marked symptoms of grave abdominal mischief supervened. The pulse became more and more rapid, the temperature steadily went up, the abdomen became distended, the face pinched, and the respiration sighing. Mr. McCarthy wired for me to go over at once prepared to operate. In his telegram he said: "Case of traumatic peritonitis; probably ruptured viscus." When I saw the patient, about 9 P.M., his temperature was 103°, his pulse 130, his breathing short and distressed, his face pinched, and the abdomen was hard, tense, and distended—tympanitic in front, dull at the flanks, and evidently containing much free fluid. There were, however, no signs of free gas in the peritoneal cavity—no obliteration of the liver dulness—showing that the stomach and intestine had probably escaped. There was no vomiting either of blood or bile, no hæmoptysis, and no hæmaturia. He had passed flatus and the urine was clear. The symptoms were those of progressive intra-peritoneal hæmorrhage and advancing peritonitis. These symptoms, the absence of signs of injury to the lungs, stomach, intestines, kidney, and bladder, and a consideration of the mechanism of the crush, led us to diagnose a rupture of the liver. Mr. McCarthy agreed with me that the patient's only chance lay in immediate abdominal section. To this the patient readily consented; but his parents gave way most reluctantly. The operation was done under difficulties, by the uncertain light of a paraffin lamp, in a miner's cottage, in a pit village on a Shropshire hill-side. About 9.30 P.M. Mr. H. H. Rubra put the patient under chloroform, and, with Mr. McCarthy's able assistance, I opened the abdomen in the middle line by an incision reaching from the ensiform cartilage to the umbilicus. As soon as the peritoneum was opened an immense quantity of black blood—fluid and clotted—escaped, and on examination, the liver was found to be ruptured. A rent, from one to two inches deep, ran from before

backwards on the under surface of the right lobe, from the portal fissure to as far up the posterior surface as I could reach. There were, in addition, evident signs of commencing peritonitis. I now endeavoured to clear the abdomen of blood-clot by free irrigation with hot water. Floating amongst the clots I noticed a fragment of liver substance wholly detached from the organ. This was examined microscopically by Professor Allen of Mason College, Birmingham, and it proved to be normal human liver tissue. I lay some stress on this fragment, as it is proof positive not only that the blood came from a rent in the liver, but also that the lesion of the liver must have been a severe one. Probably there were other small fragments detached, but they escaped notice amongst the clots. The question then was how to deal with the rent. Had it been on the anterior border or upper surface I could have sutured it with catgut or plugged it with iodoform gauze; but it extended so far backwards and upwards on the posterior surface that suturing was impossible, and I considered that gauze plugging was impracticable. I decided to trust to the hæmostatic effect of free irrigation with hot water, thorough removal of all effused blood from the peritoneal cavity, and free drainage. I accordingly again washed and sponged out the abdomen. In order to effectually drain the pelvic pouch I made a short incision just above the pubes. I then inserted two glass drainage-tubes—one through the epigastric incision going down to the rent in the liver, and the other through the suprapubic opening into the pelvis. The parietal wounds were closed with silkworm-gut sutures, antiseptic dressings were applied, and the patient was lifted back to bed. It was fortunate that I made the suprapubic opening, as for several hours there was a free bloody discharge from the lower tube, though practically nothing came through the upper tube. The patient stood the operation well, but a condition of grave abdominal collapse continued during most of the following day. His temperature fell markedly after the operation, but his pulse continued from 130 to 140 and was at times intermittent and uncountable. Thanks, however, to the frequent administration of brandy and beef-tea enemata, small quantities of brandy by the mouth, and small doses of morphia hypodermically, the patient rallied, and during the afternoon (May 6th) had four hours sleep. Mr. McCarthy and his assistant (Mr. Rubra) were most assiduous in their attention, and the patient owes his recovery in a large measure to their careful after-treatment of the case. After the first twelve hours there was very little bloody discharge from the drainage-tubes, and what there was came from the lower tube. That from the upper tube was scanty, serous, and for a few days bile-stained. On the 10th the glass tubes were removed and rubber tubes inserted. These were gradually shortened from day to day. On the 11th, although his abdominal condition was most satisfactory, the patient developed symptoms of pneumonia. For several days he brought up semi-purulent blood-stained sputum, had a moderate degree of fever, a troublesome cough, and quick, distressed breathing. On the 20th his temperature fell to normal, and from that date he progressed rapidly to recovery. The patient is now (April, 1897) fat, strong, and hearty.

Remarks.—Rupture of the liver, though by no means a rare accident, is a terribly fatal one. The chief causes of death are shock, hæmorrhage, and peritonitis: (*a*) shock from the bruising, tearing, and pulping of a vital organ; (*b*) hæmorrhage from the laceration of the great vessels at the portal fissure and traversing the liver substance; and (*c*) peritonitis from secondary septic changes in the extravasated blood and bile. At the same time it is not an absolutely mortal injury. There have been several instances in which, from the nature of the accident, the clinical signs and symptoms and the after progress of the case, it is extremely probable that the liver was ruptured, and yet the patient recovered. Still more conclusive are four cases (published by Heath, Erichsen, Morris, and Hammond) where the patients survived the accident—14, 16, 21, and 38 days—and then died from other causes. In each case a post-mortem examination showed that the liver had been ruptured—more or less severely—and that a spontaneous cure was taking place. Such cases, however, form an extremely small minority. In the vast majority—probably 99 per cent.—death rapidly takes place. In the above case I am convinced that had the patient not been operated on he would certainly have died. After the first shock of the accident passed off he had no bad symptoms for sixteen hours, during which time he had several hours' sleep. Then he began to show signs of progressive intra-peritoneal hæmorrhage and advancing peritonitis. Hour by hour his condition became graver, and when I saw him some thirty hours after the accident it was evident that he was doomed—unless we could save him by abdominal section. But how did the operation save him? I attribute the good result to the free irrigation of the peritoneal cavity with hot water and to the thorough drainage. By the irrigation I checked the bleeding from the rent in the liver, and removed a vast quantity of effused blood and lymph from the peritoneum. The drainage tube—properly used—is itself an excellent hæmostatic, as all who have had much experience of pelvic surgery are well aware. By draining away the blood as soon as it was poured out it promoted the natural arrest of hæmorrhage. Furthermore, the removal of the effused blood, lymph, and bile checked the progress of peritonitis and prevented its further development. I lay stress on the importance of draining the pelvic pouch by an opening just above the pubes. It is significant that most of the discharge came through the pelvic drainage-tube. In conclusion, I trust that the successful issue of this case will encourage other surgeons to try to save, by timely operation, cases in which the same terrible accident has occurred.

Birmingham.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

EXTENSIVE MALIGNANT DISEASE OF THE TONGUE AND FAUCES; REMOVAL; RECOVERY.

(Under the care of Mr. J. N. C. DAVIES-COLLEY.)

THE very great extent of the structures in the mouth involved in the following case necessitated a departure from the usual Whitehead operation, and the buccal incision, which is generally associated with the name of Furneaux Jordan, though previously described by F. J. Gant, exposed the affected parts better than any other of the numerous incisions which have been employed for removal of the tongue. The approximation of the edges of the mucous membrane and the use of an antiseptic locally account in great part for the rapid healing. As to the prognosis nothing can be said; but whether the disease returns or not the patient is much the better for the removal of so extensive a malignant ulcer. For the notes of the case we are indebted to Mr. H. W. Dudgeon, clinical assistant.

A man, aged fifty-six years, was admitted into Guy's Hospital on March 24th, 1897, complaining of disease of the tongue. He had first noticed a pimple far back on the right side of the tongue just after Christmas, 1896. Thinking it was due to chewing tobacco he gave up the practice, but the pimple steadily grew larger, and continued growing up to the time of the patient's presenting himself at the hospital. For the last seven weeks before admission he had not been able to swallow solid food, and consequently his diet had been entirely fluid. Six days before admission he had, he said, vomited about two quarts of liquid blood with a small mass of solid blood clot. He had never had any pain in the tongue, throat, or stomach except the pain caused by attempting to swallow solid food. For some weeks an offensive purulent discharge had run from the mouth. He had, he thought, lost a good deal of flesh in the last few months, but he attributed it to the abstinence from solid food. On admission the patient was seen to be a well-formed man, but thin. On the right side of the tongue were two extensive ulcers situated for the most part on the posterior half of the tongue. The edges were raised and everted and the centres deeply excavated; the bases were very hard, and the hardness extended downwards into the floor of the mouth on the right side, backwards to within half an inch of the epiglottis, and upwards to the right tonsil and the right half of the soft

palate. On attempting to swallow he was unable to raise the tongue from the floor of the mouth, to which it had become firmly adherent. The tongue could be protruded slightly, and it then deviated markedly to the right. No enlarged glands could be felt either under the jaw or in the neck, but there seemed to be a fulness beneath the right angle of the jaw. He complained of no pain in the mouth except when taking food, but occasionally he experienced a sharp pain in the right ear. The other organs of the body were healthy. On March 26th the patient was anæsthetised, at first with the A.C.E. mixture and subsequently with chloroform by means of a Junker's inhaler. A gag was introduced on the left side by which the mouth was forcibly opened, and the tongue was transfixed near its apex by a stout silk ligature, by which it was drawn as far out of the mouth as possible. By means of a scalpel the right cheek was cut through in a line with the mouth as far back as the wisdom tooth. Mr. Davies-Colley then snipped away with the scissors all the affected part of the gum, the anterior pillar of the fauces, the right tonsil and part of the soft palate, and finally, by a somewhat oblique incision, practically the whole of the tongue was removed. There was very little bleeding. The cut edges of the mucous membrane were approximated by salmon-gut sutures and the margins of the incision through the cheek were joined by means of a button suture. The patient bore the operation well. A mouth-wash of a solution of resorcin, ten grains to the ounce, with a drachm of glycerine, was used. He was fed by nutrient enemata, and also took a little milk by the mouth. His recovery from the operation was rapid and uneventful, and on April 1st the button suture was removed. At no time after the operation did he complain of any pain, and at an early date he took all his nourishment by the mouth. On April 12th he was practically well.

Remarks by Mr. DAVIES-COLLEY.—This case of epithelioma of the tongue is interesting on account of the great extent of that organ as well as of the soft palate and right tonsil involved without any perceptible enlargement of the lymphatics. I thought, therefore, that I was justified in removing the disease through the mouth by Whitehead's operation. I did not find it necessary to perform laryngotomy, and very little blood got into the air passages, although the section of the dorsum of the tongue on the right side came near to the epiglottis.

GREAT YARMOUTH HOSPITAL.

A CASE OF VERY EXTENSIVE FRACTURE OF THE BASE OF THE SKULL; NECROPSY.

(Under the care of Dr. H. BLAKE)

THE extensive fracture of the base of the skull which was found post mortem in this case is somewhat unusual from a blow on the occiput. A circular fracture of the base surrounding the foramen magnum is by no means rare when resulting from a fall on the vertex, for then the occipital condyles and the adjacent portions of bone are driven into the skull by the momentum of the body acting through the cervical vertebræ. The ecchymoses seen over the mastoid processes are recognised as a trustworthy sign of fracture of the posterior fossa. For the notes of this case we are indebted to Dr. K. W. Monsarrat, house surgeon.

A man, aged fifty years, was admitted to the Great Yarmouth Hospital on June 2nd, 1896, with a history of having received a blow on the back of the head by a fall which brought it in contact with the kerbstone. He was intoxicated at the time. When admitted he was unconscious, the breathing was stertorous, and there was free hæmorrhage from both ears. The pupils were contracted and equal, both reacting to light; there was a slight conjunctival reflex. Over the occipital bone on a level with the protuberance, and rather more to the left than the right of the middle line, was a large bruise, but there was no other mark of external violence. On the night of the 2nd he developed a condition of great irritability and restlessness, so that he had to be tied down in bed. The struggling was noticed to be much more marked on the right side of the body than on the left. He continued in this state until he died, except that on half a dozen occasions, all at night, he asked rational questions as to why he was tied down, &c.; as a general rule, however, he lay struggling and muttering. On the night of the 7th he had two general convulsions without any localising symptoms. At midnight on the 8th he died.

Necropsy.—The post-mortem examination was made seventeen hours after death, and the following are the notes of interest. There was a distinct flattening of the skull about the region of the external occipital protuberance over an area three inches in diameter; there was no ecchymosis there, but behind each ear over the mastoid there was a distinct bruise. On removing the skull-cap there was found an extensive sub-dural hæmorrhage over the left parietal region, without appreciable flattening of the convolutions. There were also small punctiform hæmorrhages over the right occipital and parietal and the left occipital areas of the cortex. Both frontal lobes were lacerated at their anterior extremities, and there was a considerable amount of clot in their torn substance, especially on the left side; there was also a large clot in the substance of the anterior extremity of the left temporo-sphenoidal lobe and in the central part of the left middle temporo-sphenoidal convolution. On removing the brain there was seen to be a fracture commencing at the torcular Herophili and extending outwards on each side to the junction of the petrous and squamous portions of the temporal. Each petrous bone was fractured in several directions, and the line thence extended to meet its fellow of the opposite side on the sella turcica, the posterior clinoid processes being chipped off and loose. The line of fracture was thus completed round the foramen magnum, and was fourteen inches in extent. The skull was of the usual density and thickness.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Lymphadenomatosis of the Bones.—Dermatitis Maligna.—Bodies in the Vermiform Appendix.—Rupture of the Heart.—Mucosal Cysts.—Gumma of the Spleen.

A MEETING of this society was held on May 4th, the President, Mr. BUTLIN, being in the chair.

Dr. F. PARKES WEBER showed specimens of General Lymphadenomatosis of the Bones from a man aged sixty-one years. He complained of pains in different parts of the body, and notably of bilateral abdominal pains, usually worse when he stood up. His spinal column was kept rigidly fixed; there was kyphosis, which appeared to be progressive; and he walked slowly and carefully with the aid of a stick. A little variable œdema over part of the spinal column and one lower extremity was noticed. His appetite was good and he had no fever, yet he became gradually weaker, and looked more like a man of eighty than one of sixty-one years. His actual death resulted from an asthenic type of pneumonia in both lungs. At the necropsy all the bones which were examined (including all the vertebræ and ribs, the clavicles, and the calvarium) were found more or less affected with the disease. A very vascular, small round-celled growth occupied the centre of the bones and partially replaced the osseous tissue. In some localities the growth was only covered by periosteum, all the osseous tissue beneath it having been absorbed. Portions of the ribs were bulged owing to distension by the rapidly growing neoplasm in their interior. There were some enlarged lymph glands under the right clavicle; these were apparently the site of a similar, but less vascular, growth. The kidneys showed a moderate amount of interstitial change, and in two white specks below the capsule minute, concentrically marked calculi could be seen with the microscope. These, Mr. Shattock ascertained, consisted of phosphates. The lungs showed greyish consolidation at both bases. Part of the consolidated lung was examined microscopically and presented a peculiar homogeneous hyaline appearance of the material between the cells. Unfortunately in the present case no examination of the blood was made. Dr. Weber thought that his case was of the same nature as those variously described as "multiple myeloma," "medullary pseudo-leukæmia," "myelogenic leukæmia," "pernicious anæmia with associated affection of bone marrow," and "primary sarcomatous osteitis."—The PRESIDENT said that in a case which he exhibited before the society in 1879 there were definite myeloid tumours. The existence of any disease had not been suspected until the

occurrence of a fracture of the femur shortly before death. At the necropsy it was found that the affection of bones was a widespread one. There were other cases on record in which there was nothing during life to suggest the existence of the disease.—Mr. W. G. SPENCER said that when fresh the bones in this case, and in others which he had observed, had a peculiar raspberry-red colour. The colour quickly faded when the specimens were placed in hardening solutions.

Dr. ROLLESTON and Mr. E. L. HUNT brought forward two cases of Dermatitis Maligna, or Paget's Disease of the Skin, in both of which carcinoma subsequently developed. The first case was that of a man, aged sixty years, who had had the glazed, raw condition of the skin above the pubes characteristic of the disease for eight years; two years ago nodules of carcinoma developed. The whole affected area was removed and the man recovered. A somewhat similar case, in which the scrotum and penis were affected, had been described by Dr. Radcliffe Crocker. The carcinoma probably developed from the sebaceous glands, and not from the superficial layers of the skin. The sweat glands were dilated, but did not, as in Dr. Crocker's case, appear to be undergoing carcinomatous change. The growth was a spheroidal-celled carcinoma. The second case was that of a woman, aged forty-five years. The skin affection began eight years ago on the sinus of a mammary abscess, and had spread most extensively. A year ago carcinoma developed. The whole affected area, together with glands from the axilla, was successfully removed. Microscopically the carcinoma appeared to be squamous-celled, showing a transition to a spheroidal-celled type, but no keratinisation had taken place. The modification was probably due to the extensive inflammatory changes, which were also thought to be responsible for the extensive vacuolation seen in the epithelial cells. The carcinomatous growth had certainly not arisen in the mammary glands or in the ducts, as was often the case. It was suggested that Sir James Paget's name would best be honoured by associating it with the actual morbid lesion, a long-standing dermatitis of the nipple, which he originally described, and not with analogous lesions. Both these cases had been most kindly placed at the disposal of Dr. Rolleston and Mr. Hunt by Mr. Marmaduke Sheild.—Dr. THIN said that he had seen one of the cases during life and had made sections from the parts removed. He dissented from the view that the changes were the same as those met with in rodent ulcer. The cells in rodent ulcer had very little protoplasm round the nuclei, while in Dr. Rolleston's specimens it was abundant, the cells being of the same character as those met with in ordinary epithelioma. He was sceptical as to whether carcinoma ever arose from the sebaceous glands, and could see no evidence of it in this case.—Mr. SPENCER did not think the name given to these cases quite a happy one. At the time of death there was no dermatitis, and the term "maligna" was ambiguous because it was often applied in the sense of "virulent" as well as to denote new growth. He thought that the cases came under the category of rodent ulcer and represented two somewhat divergent types, the squamous form, as in Dr. Rolleston's second case, and a commoner sebaceous form, illustrated by the first case.—Dr. ROLLESTON, in reply, said that the term "dermatitis maligna" was given to the cases by Dr. Thin soon after Sir James Paget had described his cases of disease of the nipple. In one of his cases there was dermatitis for seven years before any sign of malignant disease declared itself.

Dr. ARTHUR LATHAM showed a Vermiform Appendix which had been removed from a man, aged forty-six years, who had died from lobar pneumonia. There was no history of any symptoms connected with the appendix having occurred during life. The specimen was nine centimetres long and considerably dilated throughout its course. There was no communication between the appendix and the cæcum, the lumen of the former having been obliterated at its junction with the cæcum by adhesive enteritis. The appendix was completely filled with numerous small bodies which had the appearance of ova. The larger of these was of about the size of a dried pea. On microscopical section they showed an irregular fibrinous structure, which in places was somewhat laminated. They did not give a mucin reaction and stained readily with acid dyes. The wall of the appendix was irregularly honeycombed owing to pressure exerted by the above bodies. It was further thickened, and on section showed loss of mucous membrane and also of lymphoid tissue, possibly due to membranous enteritis. He had been unable to find any similar case recorded.

Dr. HINGSTON FOX showed a specimen of Non-perforating Rupture of the Heart, taken from the body of a stout woman, aged sixty-nine years, of good health and active habits. She was seized with præcordial pain after fatigue and a cold bath; nitrite of amyl was useless, but morphine hypodermically and a small venesection partially relieved her, and she lived forty-eight hours, troubled with vomiting and pyrexia (to 100·5° F.). Death was sudden, on slight movement. At the necropsy the pericardium was found to be full of blood; the heart, weighing fourteen ounces, was loaded with fat; and two small, superficial rents were seen on the wall of the left ventricle, not perforating the wall, and a small ecchymosis beneath the visceral pericardium at another spot. It was probable that during exertion the distended, fatty heart had ruptured the exocardium and some muscular fibres at these sites, causing slow leakage of blood, and death two days later, apparently from syncope. This form of rupture, non-perforating and but slowly fatal, from hæmorrhage appeared to be extremely rare.

Mr. S. G. SHATTOCK made a communication on Mucosal Cysts and on the significance of the Stratum Granulosum. He described three cysts removed from the neck. One, from the upper part of the neck, was lined by stratified squamous epithelium, another by columnar epithelium, whilst in the third both forms were present at different parts of the cyst. He wished specially to draw attention to the absence of any stratum granulosum. He should call all "dermoid" cysts in which no stratum granulosum could be detected "mucosal" cysts, differing from Mr. Bland Sutton, who classed all cysts, whether lined by mucous membrane or skin, as dermoids, on the ground that no line of demarcation could be drawn between skin and mucous membrane. He thought that the presence or absence of this stratum was sufficient to decide which was present. Mucous cysts, due to retention in a mucous gland, must, of course, not be confused with these mucosal cysts. Mr. Shattock remarked that the best way of demonstrating the granules histologically was by staining the sections by Gram's bacteriological method. In true dermoid cysts Mr. Shattock had never failed to find a stratum granulosum, and this was equally true of such dermoids as were devoid of epidermal appendages. He had examined three of this nature from the limbs, and one from the right lumbar region, which arose at the site of a bullet injury. Mr. Shattock held that no appendages were developed in implantation cysts, such hairs and glands as did occur being there by direct implantation only. In the epidermal covering of scars, both in animals and in plants, no growth of hairs or glands ever occurred. The granular cells were not found in the sebaceous glands, but they were found throughout the whole length of the hair follicle, and hence in sebaceous cysts, which really arose in the hair follicle, a stratum granulosum was to be found.

Dr. G. F. STILL showed two specimens of Gumma of the Spleen occurring in the subjects of Congenital Syphilis. The first was that of a boy, eleven years of age, who was under the care of Dr. Lees at the Hospital for Sick Children, Great Ormond-street, suffering from anæmia and an enlarged spleen and a general enlargement of the lymphatic glands, supposed to be due to lymphadenoma. After death the spleen was found to be greatly enlarged and to contain thick fibrous cicatrices in its substance. It was extensively affected with lardaceous disease, and the splenic vessels showed peri- and end-arteritis. There was cirrhosis of the liver of the kind usually met with as a result of congenital syphilis, and there was general enlargement of the glands, which were almost completely converted into fibrous tissue and showed syphilitic changes in the vessels. There was a record of a similar case in which the gummata were small and multiple occurring in the hospital some years ago.

Dr. STILL also showed a specimen from the museum of the same hospital taken from a child, eleven months old, who was under the care of Dr. Barlow some years ago, suffering from well-marked congenital syphilis and an enlarged spleen. There was a localised patch of fibrous tissue in the capsule about one-third of an inch in thickness, which was probably a gumma, although direct evidence, such as the existence of endarteritis in the neighbourhood, was wanting. Gumma of the spleen even in adults was very uncommon, and he had only been able to discover four other cases recorded, all by German pathologists, of its occurrence in children. In almost all there were gummata of the other organs, and in half the cases the gummata were miliary in size.

Mr. P. FURNIVALL reported that he had made a further examination of a specimen exhibited to the society in November, 1896,[1] by Dr. Kanthack and himself as a case of Myxo-sarcoma of the Colon, and they had now no doubt that it was a specimen of colloid carcinoma. The boy was only fifteen years of age when the growth was noticed, and in several recorded cases the growth had manifested itself at an unusually early age for carcinoma.

HARVEIAN SOCIETY OF LONDON.

The Anæsthetisation of Children.

A MEETING of this society was held on April 29th, Dr. MILSON being in the chair.

Mr. GEORGE ROWELL read a paper on the Anæsthetisation of Children, which will appear in our columns. The method advocated was to begin with the A.C.E. mixture and continue with ether.

Dr. FREDERIC HEWITT said that the guide suggested for estimating the depth of ether anæsthesia in children was a very valuable one. With regard to the vomiting, he considered that an interval of four or five hours after food was sufficient to avert vomiting under nitrous oxide and oxygen, and the anæsthesia thus obtained was the safest yet discovered. The tranquil breathing and somewhat equivocal signs displayed by some children under chloroform constituted an objection to this anæsthetic. He had found that in such cases when employing chloroform it was a good plan when in doubt to press the lower jaw back and so produce snoring-breathing. The slight obstruction caused more vigorous and deeper breathing and better anæsthesia also. He strongly supported Mr. Rowell in his preference for ether in the case of children, but he thought that if ether were not well borne in any case or if any embarrassed breathing arose it was a good plan to continue with chloroform. The latter given just after ether produced effects quite unlike those seen when it was used from the first, and a comparatively light anæsthesia was possible and advantageous. Mr. Rowell had said but little on the subject of laryngeal stridor in children. He (Dr. Hewitt) thought it an important matter. Some years ago he was in the habit of attempting to overcome it by producing a deeper anæsthesia; but he now found that it was better to withhold the anæsthetic until the stridor had subsided. He was aware of the remarkable effects of the particular succession of anæsthetics to which Mr. Rowell had alluded, and, in fact, he had several years ago drawn attention to this point.

Dr. SILK, as a visitor, fully endorsed the view that chloroform was by no means so safe with children as was generally supposed; in fact, he thought that many more fatalities occurred from its use than were actually recorded, and that dangerous symptoms were even more apt to develop in children than in adults. Personally, he preferred the A.C.E. mixture for routine use with children. He had been aware of the principle of giving ether by the semi-open method consecutive to A.C.E. for some time, and had frequently employed it in practice, but he had not worked out the details of the plan so carefully as had Mr. Rowell.

Dr. COCK said that he had used the open method of ether administration after beginning with the A.C.E. mixture occasionally, but it was in a good many cases possible to put quite young children under the influence of ether alone from the beginning, and that without much trouble or the usual drawbacks of ether administration in the very young. Some infants would take this anæsthetic as comfortably as chloroform, using a very fine nozzled drop bottle (Esmarch's) and the German pattern of Skinner's inhaler covered with stockingette and not with flannel.

Mr. ROWELL, in reply, said that laryngeal stridor under ether tended to right itself and was of different significance from the same symptom under chloroform.

HUNTERIAN SOCIETY.

Cerebellar Disease.—Headaches.

AN ordinary meeting of this society was held at the London Institution on April 28th, Dr. G. E. HERMAN, the President, being in the chair.

Dr. ARTHUR DAVIES exhibited a case in which there had been apparent symptoms of Cerebellar Disease, from which the patient had entirely recovered.

[1] Vide THE LANCET, Nov. 21st, 1896, p. 1458.

Dr. HINGSTON FOX introduced a discussion on Headaches by a paper which will shortly appear in our columns.—Dr. HAIG agreed as to the relationship between plus tension and headache, and gave an account of the *rôle* of uric acid in producing headache, and pointed out how by eliminating uric acid and the xanthin group in diet, not only was the headache cured, but the blood decimal markedly improved.—Dr. HARRY CAMPBELL inquired as to the exact relationship between headache and plus tension, and whether both might not be due to the same cause. He dwelt on the difficulty of ascertaining the degree of tension, and considered the aortic second sound as often very misleading, and had sometimes found it increased with a low-tension pulse. Cases of migraine with low-tension pulse were common. He regarded headache as a symptom arising from peripheral irritation in the eyes, nose, teeth, scalp, and ears, and intra-ocular tension. The anæmic headache and that common at the menopause and the syphilitic headache were dwelt upon.—Dr. DUNDAS GRANT found nasal disease a cause of a certain number of headaches, especially when the middle turbinated bodies or the sinuses were affected. Cocaine afforded relief in these cases. Localisation of headache was found to be of little value. In the vertical headache of women suffering from leucorrhœa chloride of ammonium was almost a specific.—Dr. GLOVER LYON pointed out the great value of quinine in three-grain doses in the treatment of migraine.—Dr. J. H. SEQUEIRA considered headache as not the result of plus tension, but as being associated with it.—Dr. J. F. WOODS spoke of the treatment of headaches by hypnotism and suggestion.—Dr. HINGSTON FOX replied.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

THIS society held a clinical meeting on March 16th in the out-patient room of the Leeds General Infirmary.

Mr. LITTLEWOOD showed four cases illustrating the treatment of Joint Tuberculosis by Iodoform Injections. The first patient was a female, aged thirty years, who suffered from tuberculous disease of the elbow-joint, with a history of four years' duration. She was admitted to the Leeds Infirmary on Feb. 11th, 1896, and there was then extensive tuberculous disease of the left elbow-joint, with five sinuses leading down to the soft carious bone. There was also an enlarged gland the size of a walnut in the middle of the arm, and the axilla was full of enlarged glands. The first injection was given on Feb. 12th, 1896, and was followed by twenty-three others, the last being given on Aug. 6th, 1896. She was only in the infirmary for three days and was then treated in the out-patient room. The sinuses have all healed, the enlarged glands can scarcely be felt, and she is now using her arm with great comfort, although there is some limitation of movement. The second patient was a boy, aged eight years, suffering from tuberculous disease of the hip, the history being that he had a fall four and a half years ago and had been lame since then. About Easter in 1896 he again had a fall and his condition became much worse. He was admitted to the infirmary on Sept. 1st, 1896, having well-marked signs of right hip-joint disease with abscess. The subsequent progress of the case was as follows. On Sept. 4th, 11th, 25th, and Oct. 8th the patient was aspirated, two ounces of pus being removed the first time and one and a half ounces on the other three dates. Iodoform was injected on each occasion. On Oct. 25th some clear fluid was squeezed out through the cannula and the patient was again injected. The hip was again injected on Nov. 16th and 30th. At the present time the boy is running about without a splint. The third patient was a man, aged thirty-two years, who suffered from tuberculous disease of the right shoulder-joint. He was first seen by Mr. Littlewood in August, 1896. The joint was then swollen and fixed, and any attempt at movement was extremely painful; there was a sinus in front, just above the insertion of the deltoid. The disease in the joint commenced two years ago, and seven weeks previously to this he had an attack of pleurisy. The joint commenced to discharge from the sinus in August, 1895. He had been injected ten times with glycerine and iodoform. He had had no pain since the first injection and had gained one stone in weight. During this time he had been taking petroleum emulsion. The fourth patient was a female, aged nineteen years, who suffered from tuberculous disease of the ankle joint, which

commenced twenty-one months ago. She was admitted to the infirmary on Oct. 24th, 1896. The right ankle was then much swollen. The swelling extended upwards to beyond the malleoli and downwards to the tarsus. There were three sinuses—one on the outer and one on the inner side and the third behind. All attempts at movement caused considerable pain. The first injection was given on Oct 26th and after it ten others. She came to the infirmary about once a fortnight, and then went home the day after the injection with the leg in plaster. Both the local condition and her general health have greatly improved.

Mr. LITTLEWOOD also showed a case of Diffuse Popliteal Aneurysm treated by Excision. The patient was a man, aged thirty-seven years, who was admitted to the infirmary on Feb. 8th, 1897, with a large diffuse popliteal aneurysm. He first noticed some stiffness in the ham six weeks previously. After this the swelling increased rapidly and there was a good deal of pain. On Feb. 17th all clot was turned out, and the aneurysmal portion of the vessel was excised. There was no pain after the operation. The wound healed rapidly. The man left the infirmary on March 16th, and he now walks about quite comfortably.

Mr. LITTLEWOOD also showed a small Calculus removed by Nephro-lithotomy from a man, aged twenty-seven years, who had had attacks of renal colic on the left side for four years. Twelve months ago for one day he passed some blood, but he never passed any calculi. An incision was made in the kidney at the lower end, and a small calculus weighing two grains was removed. The wound was quite healed and the stitches removed on the fifteenth day afterwards.

Mr. LITTLEWOOD also described a case in which a Sarcoma of the Upper Jaw was removed three and a half years ago. The patient was a man, aged fifty-six years, who was admitted to the infirmary on Oct. 2nd, 1893, with a sarcoma involving the superior maxilla and malar bones in the left side. He first noticed the swelling two months previously. On Oct. 4th, after preliminary laryngotomy, the upper jaw was removed with the malar bone and part of the zygoma. There has been no recurrence since.

Mr. LITTLEWOOD also showed a patient whose right kidney was removed six years ago for Tuberculous Disease.

Dr. WARDROP GRIFFITH showed a boy, aged sixteen years, who presented the phenomena of well-marked Unilateral Convulsions, which always began in the left hand, sometimes spread to the face and leg, and sometimes culminated in unconsciousness. There was no optic neuritis and no definite signs of gross intracranial disease.

Dr. GRIFFITH also showed a child, aged five years, with symptoms indicative of a Lesion in the Right Side of the Pons involving the Nucleus of the Sixth and partially that of the Seventh Nerve. There was complete paralysis of the right external rectus with partial paralysis of the right side of the face of Bell's type. There was no optic neuritis.

The following cases were also shown:—

Dr. MOUILLOT: A case of Raynaud's Disease in which the hands and feet were markedly affected.

Dr. CHURTON: A case of Traumatic Paralysis of the Left Hand with Sensory, Vaso-motor, and Trophic Symptoms.

Dr. TREVELYAN: Three cases of Graves's Disease and an unusual case of Laryngeal Tuberculosis.

Dr. BARRS: (1) Thoracic Aneurysm with Laryngeal Palsy; and (2) Enlargement of the Spleen with Hæmatemesis.

Dr. WELLS: An Unusual Form of Muscular Dislocation.

Dr. BRONNER: (1) Three cases of Senile Cataract operated on without Iridectomy; and (2) cases of Radical Cure of Mastoid Disease.

Mr. H. SECKER WALKER: (1) A case of Radical Cure of Mastoid Disease; and (2) cases of Mules's Operation.

Mr. W. H. BROWN: (1) A case of Gastro Enterostomy; (2) Malformation after Burns; and (3) Primary Syphilis in a Child.

Mr. WARD: Resection for Ununited Fracture.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

The Diarrhœas of Children.

A MEETING of this section was held on April 9th, Dr. G. F. DUFFEY, President, being in the chair.

Mr. LANGFORD SYMES read a paper entitled, Some Introductory Remarks on the Diarrhœas of Children, in which reference was made to the enormous mortality amongst children from diarrhœa, the difference in the digestive juices in the child as compared with adults, the digestion of milk by infants in the intestine, and the inability of young children to digest starch. Defective water-supply appears to affect principally children over five years of age, but infants are swept away in hundreds by milk which is infected or contaminated. The greater number of fatal diarrhœas are doubtless due to artificial feeding. In Manchester, according to Dr. Niven's returns, 97 per cent. appear to have been hand-fed. This identical percentage was also found to be the rule in America, and Bavaria returned 96 per cent. Mr. Symes classified diarrhœas as (1) dyspeptic, including simple diarrhœa and chronic diarrhœa; and (2) infective, including summer diarrhœa and cholera infantum. Such names as entero-colitis, catarrhal enteritis, muco-enteritis, and gastro-intestinal catarrh are misleading, and cannot be borne out by facts. The prevention of all these diarrhœas can be reduced to three lines of action—scientific regulation of artificial feeding, purification of the ground, and purification of milk.

Dr. W. G. SMITH said that the small intestine was the chief seat of digestive processes in adults as well as in children, and he agreed with Mr. Symes in saying that chemical changes were produced by micro-organisms in the small intestine.

BOMBAY MEDICAL AND PHYSICAL SOCIETY.

Epithelial Xerosis.—Necrosis of the Internal Ear.—Foreign Bodies in the Bladder.—Osteo-mollities.—Radiograph of a Snake.

THE first meeting of this society was held at the Esplanade Hotel Annexe on Feb. 5th, Brigade-Surgeon-Lieutenant-Colonel J. ARNOTT, Vice-President, being in the chair, and twenty-five other members being present.

Surgeon-Captain H. HERBERT read a paper on Epithelial Xerosis in natives of India, illustrating it by patients, photographs, and microscopical sections. He said that the patients showed examples of a general degeneration and chronic inflammation of mucous membranes very commonly met with in Bombay amongst the poorest classes. Very often the conjunctiva, more especially in its exposed strip on either side of the cornea, is the first membrane to show definite changes, and in the milder instances it may be the only one. During the four months from June to September, 1896, Surgeon-Captain Herbert tabulated 100 consecutive cases. Epithelial xerosis of the cornea has been described as a degeneration of the membrane found in debilitated persons exposed to strong glare and in marasmic infants, and showing itself mainly in the formation of dry greasy patches on either side of the cornea. The collection of cast-off epithelial cells and Meibomian secretion which usually covers these areas has been conveniently spoken of as "foam." The conjunctiva is generally thickened, inelastic, and wrinkled, there may be a good deal of inflammatory secretion, and in infants the cornea is liable to rapid suppurative destruction. By far the commonest xerotic area is a small patch just outside the cornea; in 100 cases this spot alone was affected four times as often as the conjunctiva on both sides of the cornea; the inner site was never alone xerotic. The xerotic patches tend to be cast off by inflammation of the cornea, primary and secondary, so that when both corneas suppurate, as they often do, there may be very little beyond a characteristic pigmentation of the conjunctiva to show the true origin and nature of the case. In 16 of the 100 cases there were no xerotic patches whatever, their absence being accounted for by keratomalacia or suppurating ulcers in nearly all. The xerotic degeneration was shown by conjunctival pigmentation, thickening, and wrinkling, and often by finely granular lids. The pigmentation is absent in white-skinned races, so that in them such cases might be difficult of interpretation. In the mild cases the patches are often thinly covered with bright, white, glistening "foam," which is sometimes frothy. Of more interest are the thick collections of soapy material on the lid borders sometimes seen in cases of conjunctivitis, primary or secondary, in Bombay. This material is quite different from the thin, frothy collections on canthi or lid margins seen both in England and India; it is indistinguishable under the microscope from that taken from a xerotic patch, and contains the same bacillus in great numbers—one closely resembling the

diphtheria bacillus in its appearance. The next evidence of degeneration described was a dirty or muddy-brown colouration resulting from an excessive development of the pigment normally to be detected in an Indian conjunctiva under the microscope. The depth of the tint depends largely on the complexion of the individual, as well as on the degree of the xerosis and the length of time it has lasted. In the commonest type the pigmentation is fairly general on both the lids and eyeball. There is never much on the upper part of the eye. It is well developed on the exposed conjunctiva on either side of the cornea and on the strip immediately below the cornea; the lower fornix is often the most deeply coloured portion of the whole membrane. This pigmentation is characteristic of xerosis, and must not be mistaken for the effects of malarial cachexia, for malaria does not colour the conjunctiva except by weakening the patient and so predisposing to xerosis. After a time "granulations" are formed, usually limited to the tarsal portion of the upper lid and extremely small. In severe cases the cornea commonly shows opacity and dulness, and it is often ulcerated. Insufficient and improper food and lowered general vitality are the principal causes of conjunctival xerosis; the chief reason for its being mainly a tropical affection is not because the glare of the sun is strong, but because in warm climates the poor can support life in a state of chronic inanition which would be impossible elsewhere. The only treatment which seems to have been serviceable is improving the general health and bandaging the eyes; the bandage, however, is often inapplicable owing to corneal complications.

Surgeon-Major W. K. HATCH described a case of Necrosis of the Internal Ear. No history of the patient's illness could be obtained; she was fairly nourished and apparently about thirty-five years of age; her speech was quite unintelligible and she seemed to hear nothing. The left auditory meatus was blocked by a red granular mass, and the part was extremely painful. Dead bone could be felt with a probe, and by means of a gouge a large sequestrum was removed, consisting of the external auditory meatus, semicircular canal, and cochlea. In the result the place healed completely and the patient was discharged from hospital in a fairly good condition.

Surgeon-Major HATCH then gave an account of the Removal of Three Pieces of "Grass Stick" from the Bladder of a woman with a No. 6 lithotrite and exhibited the Skeleton of a female who was the subject of Osteo mollities; the whole weight of the bones was—skull 6 oz., other bones 17⅛ oz.

Dr. PECHEY-PHIPSON showed a Radiograph of a Snake in which the solid urinary matter was distinctly seen. This was of interest in connexion with the possibility of diagnosing calculi in the human bladder by this means.

MEMORIAL TO THE LATE MR. JOSEPH FRY.—Lord Hillingdon, the treasurer of the "Joseph Fry Memorial Fund," is making an urgent appeal to all those who have not yet subscribed to the fund to send their contributions to him as soon as possible, to 67, Lombard-street, as the committee are anxious to close the subscription list at an early date. It is proposed to endow a bed at the Metropolitan Hospital and to erect a drinking fountain to his memory.

MEDICAL MEN AND CLUBS.—At Truro County Court, on April 23rd, Mr. W. Whitworth, M.R.C.S. Eng., L.S.A., of St. Agnes, Cornwall, sued a labourer of Goonhavern for £2 4s. for professional attendance and medicine. Defendant stated that he was entitled to the services of the medical man by virtue of his membership of the club at the dynamite works, Perranporth. Plaintiff said he made a verbal arrangement with the dynamite company to attend the members of families resident at home of men who paid into the club. In this case he attended defendant's daughter, who had been earning her living as a domestic servant, and had come home and died, and he regarded that as outside the scope of the club. His Honour said if a daughter lost her situation and went back home it would be a serious burden on the family. On the other hand, if the arrangement included all children who went back home, it would be a great increase of work to the medical man. There should be a contract in plain writing, so that it should be known what it included. If the girl did not come in the club then she was personally liable, unless it could be shown that the medical man had the defendant's express authority to attend her. Judgment was eventually given for defendant with costs.

Reviews and Notices of Books.

The Sequels of Disease, being the Lumleian Lectures delivered in the Royal College of Physicians, 1896, together with Observations on Prognosis in Disease. By Sir DYCE DUCKWORTH, M.D.Edin., LL.D., F.R.C.P.Lond. London: Longmans, Green and Co. 1896.

RAPID as has been the progress made in respect to knowledge of the nature and phenomena of disease, there is, at any rate, one chapter which is yet but imperfectly written. There is very much still to be learnt concerning the correlation of diseases, or, in other words, the altered conditions which are established by even the most transient and apparently trivial departures from the normal activities of the body. Had we clear knowledge on such matters there might be less need to veil our ignorance by the use of such phrases as imply special proclivities or morbid tendencies, and we should be enabled to understand the meaning of many of those states that now go by the colourless designation of "sequelæ." It was therefore a happy notion of the Lumleian Lecturer of 1896 to devote his lectures to an exposition of present knowledge concerning the sequels of diseases, thereby accumulating facts which may enable us to make some kind of generalisation in a subject that contains so many and various elements. Moreover, the subject has seldom before been regarded from this wider point of view, and its complexity somewhat baffles definition. This much, at any rate, is clear—namely, that a "sequel" may be due to the continued operation of the primary agency, even though separated by a long interval of time from the original disease; or, on the other hand, it may be a fresh derangement entirely, which would not, however, have occurred had not the organism been rendered vulnerable by the changes wrought in it by the previous disorder. It is only in some such sense that one derangement can truly be said to be the sequel of another, and yet in point of fact it is by no means easy to assign the real origin of the secondary affection. Syphilis is a notable example of the long persisting operation of a specific agency, and yet there are morbid conditions which may supervene in those who have been infected which can in no way be referred to the direct action of the virus. It must be more than a fortuitous circumstance that so large a proportion of tabetics should have years previously been the subjects of syphilis, but neither in its pathology nor in its amenability to treatment can spinal sclerosis be regarded as a syphilitic lesion. The numerous sequels of acute infectious diseases—especially those involving the vascular and the nervous systems—cannot in the majority of instances, be referred to the direct operation of the toxine; yet it is impossible to doubt that in some way or other these tissues are rendered by its influence more prone to subsequent inflammatory or degenerative changes. Then, too, one infectious disease may apparently render the body more vulnerable to another infection, as in the liability to tuberculosis so commonly seen after measles, and sometimes after influenza or typhoid fever. Sir Dyce Duckworth naturally devotes most space to a consideration of the sequels of specific infectious diseases, but he also shows that many local disorders have their sequels too. His general summary may be taken as merely provisional, but as offering some means of classifying the various kinds of sequelæ that are met with. These he groups in five categories: (1) The *bacterio-toxic*, which may be early or late, direct or indirect, the last-named ascribable to fresh or secondary infection; (2) the *revealing* sequels, wherein a latent or dormant taint or tendency is first evoked by the occurrence of an acute illness; (3) the *nervous*, of which trophic and sensory disorders are the chief; (4) *chemico-toxic*, as seen in cases of chronic metallic poisoning; and (5) *direct non toxic* or residual

sequels. As a contribution to a difficult subject, and as stimulating its study, these lectures should be of value. They are supplemented by an essay on Prognosis in Disease, a vitally important subject, which is treated in a manner to be expected from a physician of ripe clinical experience and sagacity.

The Toxic Amblyopias: their Classification, History, Symptoms, Pathology, and Treatment. (The Alvarenga Prize Essay.) By G. E. DE SCHWEINITZ, A.M., M.D., Professor of Ophthalmology in the Philadelphia Polyclinic. With Forty-six Illustrations and Nine Plates. Philadelphia: Lea Brothers and Co. 1896. Pp. 238.

WHEN the diseases of any organ have been roughly classified, and the principles of their treatment established by long experience, few things more useful can be undertaken than to collect and compare isolated cases described by different authors in books, journals, and reports of societies in which certain symptoms have formed prominent features. By arranging such cases in groups conclusions can sometimes be drawn which may prove of the greatest service in establishing correct diagnosis, and in leading as a result to appropriate treatment. Such service Dr. Schweinitz has rendered to Ophthalmology in the work before us. The extensive bibliography with which each chapter closes shows that he has been most industrious and painstaking in ransacking every publication (and their name is legion) in which reports of cases of toxic amblyopia can be found, whilst the text shows he has taken infinite trouble in mastering their contents. There is, in addition, a considerable amount of original investigation, the author having performed many experiments on animals with reference to the effects of alcohol, quinine, salicylic acid, and filix mas in inducing amblyopia and amaurosis. The classification adopted by Dr. Schweinitz is essentially physiological, and he has brought together notes and observations on no less than eighty-six agents, including those which act as mydriatics, or those which are myotics, those which are nervous sedatives, like acetanilid and phenozone, various anthelmintics, and ptomaines. Dr. Schweinitz appears to entertain no doubts in regard to the existence of alcoholic amblyopia, and observes that most of the investigations show that the anatomical basis of this affection consists of an augmentation of nuclei, hypertrophy of the connective tissue, and wasting of the nerve fibres of a limited portion of the optic nerve, known as the papillo macular bundle; in fact, that there is an interstitial sclerosing inflammation comparable according to Samelsohn, to the same pathological process which alcohol produces in the liver—for example, an interstitial hepatitis. This statement is supported by the drawings of Nettleship and Edmunds and of Uhthoff. The evidence of the existence of tobacco amaurosis seems to us to be overwhelming, and although apparently many men habitually smoke to excess without experiencing discomfort, yet much allowance must be made in regard to the particular kind of tobacco used, some kinds, as the Havana, only containing 2 per cent. of nicotine, whilst Virginian tobacco contains close upon 7 per cent.; and also allowance must be made for the density of the cigars used, and, in addition, for the particular mode in which smoking is conducted—that is, whether it is simply taken into the mouth and expelled, or whether it is discharged through the nose, or is allowed to enter the lungs, in both the latter cases being brought into contact with a much larger extent of surface. The period of the day also exerts an influence—whether the tobacco be taken before or after meals. Most smokers can probably use without harm from two to three ounces weekly, but idiosyncrasy is an important factor. A larger quantity and stronger tobacco can be consumed in the form of a cigar than in that of a pipe, perhaps owing to the larger formation of volatile bases in the latter case. Though some, like Mr. Hutchinson, have thought that alcohol was antagonistic, others, and with these Dr. Schweinitz is inclined to agree, believe that alcohol freely used with tobacco predisposes the patient to central amblyopia. It is remarkable that certain races, as the Turks, the South Americans, and Cubans, are not liable to tobacco amaurosis. The proper treatment of this affection is total abstinence from tobacco and alcohol, the administration of strychnia, and, perhaps, the application of voltaic electricity. Dr. Schweinitz remarks that the "great consumption of tobacco by sailors and railway employés renders it desirable that examinations for central scotoma should be made among those who are obliged to watch coloured signal lamps." There is an interesting section on Quinine Amaurosis, and it is stated that usually the dose which causes blindness is a large one, but it has varied from fifteen grains to an ounce in twenty-four hours; yet enormous doses—e.g., one ounce—have been taken without disastrous results. The ophthalmoscopic symptoms are that the disc is pallid and the arteries very small, with in many cases a greyish haze of the retina and a cherry-coloured spot in the macula, the appearances resembling those of embolism of the central artery. Many drawings illustrate the extent of the scotomata observed in different cases and of the microscopic appearances of the nerve. We commend to our readers the chapters on Lead and Carbolic Acid Poisoning. Altogether, the work, which must have involved a large amount of labour, is one that should be carefully studied by every ophthalmic surgeon, and it fills a hiatus in the wide subject of ophthalmic disease.

Pioneers of Evolution, from Thales to Huxley. By EDWARD CLODD. London: Grant Richards. 1897.

THERE is not a more fascinating subject than the evolution of "Evolution," and despite the comparatively small size of the volume before us the author has not shorn the subject of one whit of its absorbing interest. We have read this volume with considerable pleasure, giving, as it does, a concise, but none the less clear and complete, account of the history of the origin of species. In it are illustrated the wide fluctuations of human thought and the pernicious influence upon advancing knowledge which certain deep-rooted and erroneous ideas have effected. Dealing in historic sequence with the pioneers of evolution, from Thales to Huxley, the author has interposed a trenchant chapter on the Arrest of Enquiry. It is here that the author shows more animation than when he poses as a mere historian. He is caustically emphatic upon the obstacles placed in the way of advance by the teachings of the Church. "Between birth and revival there were," he says, "The centuries of suspended animation when the nepenthe of dogma drugged the reason." And so the arrest of enquiry occurred between the dates A.D. 50 to A.D. 400, when the Christian doctrine was founded and developed. In all that pertains to these doctrines the author is, of course, a very decided sceptic. He does not, however, in the chapter on Modern Evolution, following that upon the Renascence of Science (A.D. 1600 onwards) improve his position as a controversialist. However right and correct he may be in his views, it is hardly respectful to speak of Dr. Butler as a "desiccated pedagogue" because he publicly rebuked Darwin for wasting time on such useless subjects as, Dr. Butler thought, were experiments in chemistry. Then, again, whilst showing very distinctly that Wallace was the first who conceived the idea of the survival of the fittest, and according him, as Darwin also did, the honour of the conception, still, because Mr. Wallace would not allow that natural selection explains the origin of man's spiritual and intellectual nature, Mr. Clodd regards him as not keeping his first estate and as dropping out of the ranks of the pioneers of evolution. Yet of Mr. Wallace's work Darwin said: "Your words have come true with a vengeance; that

I should be forestalled," &c. And again: "So all my originality, whatever it may amount to, will be smashed, though my book, if it will ever have any value, will not be deteriorated, as all the labour consists in the application of the theory." We suppose Mr. Clodd would discount equally the work which many eminent men of science of the present day have done who happen to hold different views to his own on certain abstruse subjects. He backs his arguments on the absurdity of entertaining any faith in psychical phenomena by alluding to certain exposures of the tricks of spiritualists. It is to be admitted that in this field there has been much that has been shown to be fraudulent, but the author exhibits prejudice surely by cynically remarking that these things are done "of course in the dark." A scientific thinker must admit all conditions in experiment if he is to make accurate deductions. The luminous property of phosphorus and of other substances can only be made evident by viewing them in the dark, and more recently the existence of a new form of matter in the x rays was only made manifest by photography or by using a fluorescent medium in a darkened chamber. To admit arguments of this kind we are asked to admit also that the degree of conception or insight of all men is the same, but we should have been still in the dark as to the origin of species if some men's insight into the nature of things had not been keener than that of their fellows. The student of science can, after all, only express belief or disbelief, he can never assert positively what is impossible. There are things beyond the mental gamut. The acutely sensitive photographic plate records the existence of more stars than the eye can see, and which is to be believed?

We may point out to the author that Professor Poulton has, in the April number of *Science Progress*, drawn attention to a remarkable anticipation of modern views on evolution which is seen to occur in the writing of "that great pioneer of modern anthropological and ethnological research," James Cowles Prichard, who was born at Ross, in Herefordshire, in 1786. His conclusions in his second volume of researches into the physical history of mankind (second edition, 1826) on the transmission of acquired characters appear to be identical with those independently arrived at by Professor Weissmann over half a century later. Professor Poulton remarks at the end of his paper that sufficient has been said to prove that the author was one of the most remarkable and clear-sighted of the predecessors of Darwin and Wallace. In view of this conclusion the name of Prichard is well worthy to be added to the list of the pioneers of evolution.

The book is illustrated with four admirable portraits, by the Swan Electric Company, of Darwin, Wallace, Spencer, and Huxley. It contains a very readable and interesting history of the growth of thought on the origin of species, and those who have little time to devote to the study of the well-known large and ponderous works should avail themselves of the opportunity of intellectual cultivation which this book offers.

LIBRARY TABLE.

Archives de Physiologie. Publiées par MM. Bouchard, Chauveau, et Marey. Cinquième Série. Tome ix., No. 2. April, 1897.—The more important articles amongst the twenty that are contained in this part of the Archives de Physiologie are as follows:—M. Charles Rouget writes on the Histology of the Terminal Fibres of the Motor Nerves in the Striated Muscles of Amphibia. These he has rendered visible by the employment of methylene-blue, and shows both by description and in drawings that they are arranged in a helicoidal manner and present a moniliform aspect. M. A. Chauveau gives an account of a method of demonstrating that in living muscle positive work subtracts from, whilst negative work adds to, the energy of the motor, as it does in the inanimate world. M. A. Imbert discusses the mechanism of muscular contraction, and associates it with the superficial tension of liquids. M. F. Laulanié gives the results of his experiments on varnishing rabbits and the causes of death. Death ensues, he shows, owing to increased radiation of heat and consecutive disturbance of the digestive functions. M. J. Lefèvre publishes his Calorimetric Researches on the Mammifers, from which he deduces certain general laws of refrigeration by means of water. He shows that the lower the temperature to which the animal is exposed the quicker does its temperature fall. M. C. Delezenne supplies a long article on the Coagulation of the Blood in Birds, the conclusion he has arrived at being reserved for a future paper. MM. Mairet and Vires contribute an article on the Toxicity of the Liver, which they show to be considerable. MM. E. Wertheimer and L. Lepage describe their attempts to discover the mode of absorption of the liver pigments, and are satisfied that it is chiefly accomplished through the blood and not through the lymphatic vessels. M. J. Laudenbach of Kiev continues his Investigations on the Hæmopoietic Function of the Spleen, and has satisfied himself that the spleen does take part in the formation of hæmoglobin and in the maturation of the red corpuscles of the blood. M. Doyon gives the results of his researches on the motor and inhibitory nervous supply to the muscular tissue in the lungs. He finds both sets of nerves in the vagus. M.M. D. Courtade and J. F. Guyon have investigated the motor influence exerted by the great sympathetic nerve. They demonstrate that this set of nerve-fibres causes relaxation of the longitudinal and contraction of the circular fibres. M. Ch. A. François-Franck and L. Hallion continue their researches on the vaso-motor innervation of the liver. M.M. A. Dastre and N. Floresco supply "A Contribution to the Study of Bilirubin," and show that bilirubin does not exist in a free state in nature, but in combination with alkalies forming alkaline bilirubinates.

Fads of an Old Physician. By GEORGE S. KEITH, M.D., LL.D., F.R.C.P. Edin. London: Adam and Charles Black. 1897. Pp. 173. Price 2*s.* 6*d.*—This is practically an improved and enlarged edition of the "Plea for a Simpler Life," which was reviewed in our issue of Jan. 18th, 1896 (page 171). On that occasion we referred to the absence of "instructions for the guidance of individuals in ordinary health," but Dr. Keith has now supplied what is wanting by giving an outline of his daily dietary. His chief meal is dinner at 7 P.M., consisting of vegetable soup or fish-soup, followed by fish (not more than 3 oz.) with a potato and always another vegetable, stewed fruit with cream, or pudding, or fruit tart. If there is no fish an ounce or two, certainly not more, of lamb, game, rabbit, or tripe may be taken once or twice a week. Dr. Keith has followed this system for about forty years, is now seventy-eight years of age, and finds that he enjoys good health. He has much to say on the manifold benefits of drinking hot water; with respect to alcohol he counsels abstemiousness, but not prohibition. His *menus* would inevitably be anathema to the average diner-out, but, on the other hand, many dyspeptics and victims of the uric acid diathesis would probably benefit by them.

Dental Surgeon's Daily Diary and Appointment Book for 1897. London: John Bale and Sons and Claudius Ash and Sons. Pp. 224. Price 6*s.*—This diary is a well-bound volume of quarto size and nearly square; the paper is of good quality; the ruling and printed headings are so planned that six week-days are shown on each alternate opening, three lines being left for the entry of engagements at each hour from 9 A.M. to 6 P.M.; the intervening openings are reserved for memoranda, a few lines being set apart for the Sundays. The alphabetical index is ample and the diary is well adapted for professional use.

The Ethics of Diet. Revised and Enlarged Edition. By HOWARD WILLIAMS, M.A. London: Swan Sonnenschein and Co. and The Ideal Publishing Union, Limited. 1896. Pp. 597.—This well-written and thoroughly readable book contains much that is interesting from a literary and historical point of view. The author seeks to inculcate vegetarian principles by arguments taken from the works of numerous writers, ancient and modern, his copious quotations being dexterously managed, so that the narrative is never disjointed, prosy, or dull. Physiological questions are scarcely introduced, "kreophagy" being condemned on the grounds that it is both cruel to the lower animals and debasing to mankind. Some of the patristic writers are included among the authorities relied on, but there is naturally no reference to the passage in the Epistle to the Romans where St. Paul remarks that "One believeth that he may eat all things; another, who is weak, eateth herbs."

The Matron's Course: an Introduction to Hospital and Private Nursing. By Miss S. E. ORME, Lady Superintendent, London Temperance Hospital. London: the Scientific Press. 1897. Pp. 87. Price 1*s.*—This little book consists of twelve lectures which give a clear and easily understood view of the things requisite to be learned by a nurse. It is not overloaded with anatomy and physiology, but deals with matters of practical utility, such as disinfection, bed-making, the prevention of bed-sores, the administration of food, details of the attention required by a patient, the observation of symptoms, &c. There is also much judicious advice on the subject of a nurse's general demeanour, but, strangely enough, there appears to be no reference to bathing, except as a method of treatment in typhoid fever.

Madeira and the Canary Islands. By A. SAMLER BROWN. Fourth Edition. London: Sampson Low, Marston, and Co. Cape Town and Johannesburg: J. C. Juta and Co. 1896. Pp. 267. Price 2*s.* 6*d.*—This convenient volume can be recommended to all who wish for information on the subject of Madeira, the Canary Islands, and the Azores. It contains copious lists of the steamers which call at the various ports, maps of Madeira, and of each of the Canary Islands, hints useful both to visitors and residents, whether invalids or not, details of excursions over all the islands, a long account of their commercial position and productive capabilities, past and present, and, in order that nothing may be wanting anywhere, a sketch of their history from the earliest times since their discovery in the first half of the fourteenth century.

JOURNALS AND REVIEWS.

The Practitioner. Dr. J. F. Goodhart, writing on Appendicitis from a Physician's Point of View, gives an interesting and instructive review of numerous cases which have come under his observation. Mr. C. A. Morton of Bristol describes a case of Cholecystotomy in which, finding that it was impossible to bring the gall-bladder to the wound in the abdominal wall, he adopted a recommendation made by Mr. Mayo Robson, and united the parietal peritoneum to the edges of the incision in the gall bladder; before doing this, however, it was necessary to peel the peritoneum off the under surface of the abdominal wall. With a view to increasing the coagulability of the blood, he administered a two-drachm dose of chloride of calcium by enema a few hours before the operation. Dr. G. E. Herman writes on the Kind of Instruction Suitable for Midwives, and Dr. A. G. Miller on the Radical Cure of Hernia. The "Causerie" discusses a financial aspect of surgery in the fourteenth century, and is highly amusing.

Journal of Balneology and Climatology.—The British Balneological and Climatological Society, although of comparatively recent origin, has been so well supported that it finds itself in a position to bring out a quarterly journal devoted to its special subjects. The first number appeared last January, with seven original articles, useful editorial articles and notes, reviews of a number of books, and lengthy reports of two meetings of the Society. The first of the original articles is on Balneology, Old and New, by Sir Edward Sieveking. It is followed by Dr. A. S. Myrtle's Presidential Address delivered at the opening of the second session of the Society last October, after which come short papers on Natural Mineral Waters by Mr. W. H. Pearce, and on the Climate of Ilfracombe by Dr. C. W. E. Toller. Dr. William Ewart contributes a long article, largely historical, on the Decrease of Ague and Aguish Affections in London, and Mr. D. E. Flinn writes on Wintering Stations in Ireland. Most of the papers in the second number are practical ones on the treatment of pulmonary phthisis and gout. Dr. Samuel Hyde, the editor, urges the railway companies serving health resorts to charge lower fares. The journal is published in the middle of January, April, July, and October by Messrs. John Bale, Sons, and Danielsson, 85–89, Great Titchfield-street, W.; it contains rather more than 100 pages, royal octavo; the price is 2*s.*

Le Vélo Médicale.—Cyclists contemplating expeditions in France will find a variety of useful information in this journal, which is brought out monthly under the auspices of the Union Médicale Vélocipédique et Athlétique de France. Dr. Oscar Jennings is president of the association, and has published articles on "Cyclotherapie" in the paper. The office is at 26, Rue Joubert, Paris; the price of the journal is fifty centimes.

New Inventions.

A NEW BOUGIE-CATHETER.

THE Medical Supply Association of Edinburgh have manufactured, at the suggestion of Dr. Cuthbert Bowen, of the General Hospital, Barbadoes, a set of silver bougie-catheters which are a decided improvement on any of the instruments at present in use. The advantage claimed for these bougie-catheters over simple catheters is in the facility with which they can be cleaned and rendered aseptic, the apertures being in the blunt end of the bougie, and not at the side as in the ordinary silver catheter. These instruments, as their name implies, are capable of being used either for gradual dilatation of the urethra in stricture or for the withdrawal of urine in cases of simple retention. By the removal of a screw plug in the handle the bougie can be instantly converted into a catheter, all uncertainty as to whether the instrument is in the bladder being removed by the flowing of urine through the handle. These instruments run in sizes from 1 to 21, the gradations being extremely gradual; thus the advantages of the bougie are retained and the disadvantages of a catheter avoided.

UNIVERSITY OF LONDON.—The following examiners for the year 1897–8 were elected at the meeting of the Senate held on April 28th:—Experimental Philosophy: Professor G. F. FitzGerald and Professor Silvanus Thompson. Chemistry: Professor Wyndham R. Dunstan and Professor William Ramsay. Botany and Vegetable Physiology: Professor J. Reynolds Green and Professor J. W. H. Trail. Comparative Anatomy and Zoology: Mr. F. E. Beddard and Mr. W. Haxland Benham. Practice of Medicine: Dr. W. H. Allchin and Dr. Frederick Taylor. Surgery: Mr. William Anderson and Mr. Henry Morris. Anatomy: Professor D. J. Cunningham and Professor G. D. Thane. Physiology: Professor E. A. Schäfer and Professor William Stirling. Obstetric Medicine: Dr. G. Ernest Herman and Dr. Peter Horrocks. Materia Medica and Pharmaceutical Chemistry: Dr. Sidney Phillips and Dr. W. Hale White. Forensic Medicine: Professor J. Dixon Mann and Dr. Thomas Stevenson. State Medicine: Dr. Edward Seaton and Dr. Arthur Newsholme. Mental Physiology: Professor S. Alexander and Dr. T. Claye Shaw.

THE LANCET.

LONDON: SATURDAY, MAY 8, 1897.

THE Public Health (Scotland) Bill has begun what will probably prove a slow progress through the Grand Committee stage. Notice has already been given of over sixty pages of amendments, and the list is still being added to. We are glad to observe that they include proposals intended to obviate nearly every one of the defects to which we called attention in a recent article.[1] The formation of port sanitary authorities, the levelling and macadamising of private streets in populous places, the prevention of wakes in fatal cases of infectious disease, and the prevention of railway manure nuisances even when the nuisance arises in connexion with covered trucks are dealt with in suitable amendments. A number of valuable clauses are set down in the name of Sir WILLIAM PRIESTLEY. Sir CHARLES CAMERON is also a member and should be useful, but it is very unfortunate that Dr. FARQUHARSON, in proposing that the Bill should be remitted to a Committee, thereby effected his own exclusion from its deliberations.

The opening meeting on Tuesday last was in some respects satisfactory and in others the reverse. Certain of the proposals made were of a distinctly retrograde character, and one of these was carried, though only by a very narrow majority. In the clause dealing with the appointment of medical officers and sanitary inspectors, one Member made an extraordinary suggestion for the deletion of the stipulation that local authorities "shall allow to every such medical officer and every other officer or clerk appointed by them on account of his employment a proper salary." It did not appear whether the honourable Member thought that the withholding of a proper salary from a competent official, or the appointment of an official so incompetent that he should not deserve a proper salary, would be the better course to adopt in the sacred cause of economy. Anyhow, the amendment was rejected out of hand. It is unfortunate that a proposal advocated by Sir ROBERT REID did not meet with the same fate. At present every new medical officer of health must be the holder of a Diploma in Public Health. It seems that if a vacancy were to occur in a particular town which Sir ROBERT REID represents none of the medical men in practice there would at present be in a position to accept the office, and he urged that the town might in consequence require to bring a man from a distance and pay him a large salary to devote all his time to his duties. The risk is imaginary. The examinations in State Medicine are not prohibitive to a man in practice; and a practitioner who will not take the trouble to study the subject and obtain a qualification has no claim to a new office, which should always be filled by a man who has sufficient belief in the value of sanitation and sufficient perseverance to carry him through the required examination. If by chance any community were without such a man, there are now plenty of qualified applicants even for small salaries. Whether the local authority, which seems to have made a representation to Sir ROBERT REID, had any fear of being compelled to avail itself of the services of a county officer, we know not, but in the interests of administrative uniformity no such fear should have had any weight given to it. In the end, however, the proposal that the Local Government Board be permitted to sanction the appointment in burghs of unqualified officials was agreed to by a majority of two votes, including that of the LORD ADVOCATE, who then blandly inquired whether it was desired to allow the same liberty in the case of county health-officers. We hardly think the Committee will desire anything so reactionary, but the fact is that a genuine sympathy with public health is the first qualification for any Committee or Government which wishes to pass a useful Bill, and in such a matter slackness in detail is likely to be interpreted as due to weakness of principle or to unexpressed dread of sanitary progress.

Whether there will be any further tendency to sanction administration by incompetent and unqualified officials remains to be seen. The opportunity, however, is afforded by a document issued to the Committee by sanitary inspectors in Scotland. It certainly tends to justify the complaint made by Dr. BRUCE in a letter which we publish elsewhere. Anyone acquainted with English methods will hardly believe that in Scotland sanitary inspectors venture to ask Parliament to confer on them the statutory right, in the case of manufactories, buildings, and premises used for trade purposes, to certify what is "a nuisance or injurious or dangerous to the health of any of the inhabitants." It is obviously preposterous that certification of anything as a nuisance or dangerous or injurious to health should be given by anyone but a thoroughly qualified medical man, or by a group of people who feel that their health is actually being injured, as provided for in the clause contained in the Bill. Even in the latter event we can hardly suppose that any local authority would think of acting in the absence of a report from its medical officer. In the same "memoranda" there are various suggestions of a similar character, some of them almost amounting to a proposal that the sanitary inspector should usurp the place of the local authority.

One naturally turns to the Scotch Acts to ascertain what are the special qualifications required of sanitary inspectors which give them any kind of justification for the claims which they advance. The new Bill makes reference to "qualifications set forth ..... in Section 54 of the Local Government (Scotland) Act, 1889." But on turning to this Section, and to the existing Public Health Acts, and to the Burgh Police Act, the fact emerges that the law requires no qualification of any sort whatever for any sanitary inspector appointed by any local authority, urban or rural, in Scotland. In the case of a county council, the person appointed as sanitary inspector must have had three years' experience under a local authority. A county council, however, is not a local authority for administration of the Public Health Acts, and, we repeat, the law demands no examination or certificate

[1] THE LANCET, Feb. 13th, 1897.

of any kind for sanitary inspectors of local authorities. At the same time, it is just as sanitary inspectors of local authorities that they request power to certify as to what trades, &c., are nuisances within the meaning of the Acts. Seeing that the law requires no qualification for sanitary inspectors, we turn to the document issued by themselves for evidence of competence for such work. It may be assumed that the paper is the outcome of the deliberations of the principal inspectors, and the positions occupied by the signatories support the assumption. Yet the production bears on the face of it evidence that the writers are not acquainted with the most elementary rules of English grammar. They tell us that a particular section of an Act "has been found to work satisfactory." They declare, in small capitals, that "the meeting of local authorities occur either once a fortnight or once a month." In one line "the Council ..... were gratified" and in the next "the Council submits," and so forth. Most absurd of all, regarding Clause 89 they endeavour to instruct the Committee itself in grammar, telling it to delete "that purpose" and insert "these purposes," the matter in question being "a proper supply of water for the use of lodgers." The terminal "s" in lodgers has been enough to lead the whole association of sanitary inspectors astray! One member of the Committee scouted the idea of sanitary inspectors in Scotland being placed in the same category as nuisance inspectors in England, and in doing so he paid only a left-handed compliment to the latter set of officials.

Facts, however, must be faced as they stand. The Government declares that while it will not directly subordinate sanitary inspectors to medical officers its policy is to allow local authorities, subject to the consent of the Local Government Board, to "regulate the duties of ..... medical officers and sanitary inspectors and their relations to each other, whether appointed before or subsequent to the commencement of this Act." This concession is better than nothing. If it is to have the very slightest value in urban districts it is obvious that those Sections of the Burgh Police (Scotland) Act of 1892, which already lay down the duties of medical officers and sanitary inspectors, will require to be repealed. How much they stand in need of repeal may be judged of by Section 75, which runs thus: "The Commissioners shall appoint a sanitary inspector, subject to the provisions of the Public Health Acts, whose duty it shall be to enforce the sanitary provisions of such Acts and this Act." Let it be observed that the term "such Acts" will include the present Bill when it becomes law, and that the law does not require of the sanitary inspector any kind of qualification, but that it does require of every newly appointed medical officer a diploma, not only in medicine, but also in public health. Yet in a newly formed burgh the man who was yesterday plastering a wall or sawing a plank, and who has been similarly occupied during all his working life, is to-day pitchforked into the position of "superintending" the sanitary provisions of the Public Health Acts, while to the doubly examined and certified medical officer are relegated certain duties relating to "the existence of disease" within his district. Mr. W. S. GILBERT never suggested anything more whimsical. We can hardly conceive that the Bill will pass without these clauses of the Burgh Act being erased from the Statute Book.

ANYONE who is privileged to enter the depressing portal of one of our big London infirmaries or workhouses, and who notices the children there, will see some with sore heads and others with sore eyes, who have been there month after month, perhaps year after year, spending the best years of their lives—best, that is, for educational purposes—without any education, and perhaps with harmful associates around them. Yet if these children are sent to, and if they are accepted at, one of the big district schools, they spread, as we mentioned in our leading columns last week, disease amongst the others because of the want of means of classification, and the overcrowding and deficient cubic space. Mr. NETTLESHIP'S letter (dated April 22nd) to the *Times* is well worthy of perusal as an illustration of the evils which result from these schools as regards ophthalmia alone. He mentions there the case of a girl who was under his care on and off from 1873 to 1888 for the results of ophthalmia acquired at one of the schools when she was in the infant department. He says of her: "Her life has been largely spoilt by the disease and the ratepayers put to expense in consequence." Even when the children are cured and sent to one of these schools, some of which contain 1600 or 1700 scholars, they lack anything like personal attention owing to the size of the schools, and owing, as it would appear from the evidence before the Departmental Committee, to the deficiency or the inefficiency of the teaching staff. Hence the want of individuality, the inertness, and sluggishness which characterise the typical pauper child. No one can read the evidence and report of the Poor-law Schools Departmental Committee without becoming aware that grave flaws exist in the administration of these schools, for which, not only the guardians, from whom the managers of these schools are elected, but also the Local Government Board, are responsible. Matters have been going on thus for many years, the number of inspectors being quite inadequate for the work; and it appears from the evidence submitted that it was useless to look for reform either to the managers of the schools or to the Local Government Board. Even when the Local Government Board did make recommendations to the respective managers of schools they were not always carried out, and there existed no adequate means of enforcing compliance (questions 743, &c.). The principal recommendations of the Departmental Committee are:—That a new central authority be appointed for the metropolis, which shall have the control and supervision of *all* the London pauper schools, and *all* the children; that ophthalmic, and other hospital schools be established for the reception of all children suffering from contagious diseases, and that arrangements be made for their education whilst in these institutions; that suitable homes be provided for feeble-minded children on the boarding-out system; and that further provision be made for inspection, additional women inspectors being appointed, who, as a rule, should possess medical qualifications.

On Feb. 20th an important deputation of the guardians

and school managers waited on the President of the Local Government Board, who, in reply, stated that it was impossible to leave matters as they were and to ignore the recommendations of the Departmental Committee. The remedy lay between adopting them in their entirety, or in part—viz., by placing only the children medically or physically defective under the care of a new central authority. This latter was the plan he proposed to adopt, and to embody in a draft general order. The special classes of children to be thus dealt with will be those suffering from ophthalmia or other diseases of the eye, disease of the skin or scalp, those requiring convalescent treatment, those presenting physical or mental defects, those ordered by a magistrate to an industrial school under the Act of 1866, probably also those in the *Exmouth* training ship, and those who are boarded out. It is proposed that the new authority shall consist partly of guardians and partly of nominees of the Local Government Board. Such an arrangement will doubtless have some advantages, chief among which is that it will liberate at once a great deal of the accommodation in the existing schools which is sadly needed.

But the medical and the educational evils to which we have referred can only be adequately met by the establishment of a new central board for all the pauper children of the metropolis. Such a board would be more likely to consist of persons really competent and experienced in the education and management of children. They would, in the second place, be more likely to elect competent and sufficient officers to the posts of teachers. They would, moreover, be able to balance between the overcrowded schools and those having vacancies, and would be able to establish separate institutions for the treatment of ophthalmia, ringworm, and the other infectious conditions, to which children are liable. Such a central authority would be the most competent to judge how far the existing schools comply with the real educational needs of the pauper children. Those familiar with the average pauper child know that to give such children interest in their work by cultivating their manual dexterity is the best way to educate their cerebral functions, and if more institutions such as the *Exmouth* training ship were established for the boys and more cottage homes for the reception of limited numbers of girls, there is no doubt whatever that the future of these children would be greatly ameliorated, and in all probability they would thus be saved from a career of crime and attracted to a career of usefulness. The half measures proposed will undoubtedly be some improvement, but nothing short of a more radical reform, such as that recommended by the Departmental Committee, will fully meet the necessities of the case.

THE profession and the public of Birmingham have always taken creditable interest in the subject of hospital reform. Dr. HESLOP, of Birmingham, did much to raise the estimate of club practice. A few years ago a committee investigated the subject and anticipated the principal conclusions which have been reached by later inquirers. Birmingham also was largely concerned in the exposure of the abuses of medical aid associations. It is not remarkable, therefore, that Birmingham is again to the fore in the discussion of the question of Hospital Abuse, and that the profession is giving valuable aid in the promotion of the principal objects of the Hospital Reform Association. If we may judge from the letters in the Birmingham papers the whole community is exercised on the subject, and is probing deeply into the very roots and principles of the hospital system. Last week we reported a meeting of the Hospital Reform Association in Birmingham, presided over by Mr. JORDAN LLOYD, F.R.C.S., surgeon to the Queen's Hospital, Birmingham. The speeches made at this meeting originated the correspondence which has since appeared in the *Birmingham Daily Post*. Mr. LLOYD'S speech on the subject is very valuable. When the hospital surgeons of the country take their proper place in this controversy, and lend a helping hand to their brethren in the ranks of general practice in defining to the public the real place and function of hospitals, the day of reform will not be far distant. Mr. LLOYD was explicit on one point on which erroneous representations have been made, and on which it is of the highest importance that there should be no misconception. Mr. LLOYD said: "*The first purpose of a hospital is to supply the sick with the medical attention which their case demanded, and which they were unable to obtain by reason either of their poverty or of the severity or peculiarity of their malady.*" "Another reason," said Mr. LLOYD, evidently meaning a secondary reason, "for the existence of hospitals—and it was a real reason—was the training of medical men." After this clear deliverance from a prominent hospital surgeon it is unnecessary and somewhat ungracious for people to write in the Birmingham papers as if the profession maintained the contrary opinion, that hospitals existed first for the education of medical men and that the advantage of the poor was only a secondary reason for their existence. The fact is palpably as Mr. JORDAN LLOYD states it. Subscribers and governors of hospitals are mainly laymen. One of the last things they think about is the promotion of medical education. They subscribe because they wish to help to provide a bed for a poor sick man, woman, or child. Occasionally there is a selfish object at the bottom of this apparent charity, but we will not libel the generality of subscribers by doubting that they contemplate the relief of an urgent case of disease or accident which can not be accommodated at home.

We are not denying the use of hospitals as centres of medical education. These they undoubtedly are, and the poor as well as the rich benefit by the opportunities thus afforded for teaching. But this *métier* of hospitals is a secondary one. Medical education would take care of itself if there were no hospitals at all. In some conceivable respects it would or might fare better. But undoubtedly in present circumstances hospital practice is an enormous and valuable means of education, though the very popularity of hospitals shows that this means is used humanely and in subordination to the primary purpose of serving and treating the poor. Mr. LLOYD entirely approves in principle of a Central Hospital Board, and proposed a resolution averring that the question of hospital reform should be dealt with without further delay by the lay managers and acting staffs

of our various hospitals and dispensaries, and that the recommendations of the Hospital Reform Association for the better regulation of the out-patient and casualty departments are worthy of close consideration. He and Dr. ISAMBARD OWEN differed as to the degree in which the number of out-patients could be restricted. But this is a matter of detail and of experience on which there need be no permanent difference between men who with equal earnestness defend the essential principle that hospitals are not for the general accommodation of the public, or even of the poor, but for selected cases, incapable of proper treatment at home, and for the patient who is unable to command at his own expense the skill which his case requires. One other opinion of Mr. JORDAN LLOYD, expressed with much confidence, should be noted—his conviction, after years of thought, that there are more economical ways of administering hospitals than are now practised. This is, and has long been, our own opinion. But it is only fair to remember that some of our best hospitals are administered with an economy contrasting vividly with the costly management of State-aided or rate-supported institutions.

One of the correspondents of our contemporary, the *Birmingham Daily Post*, Dr. FELIX VINRACE, shows with great clearness the tendency to a complete change in the conception of the character of hospitals. Instead of being regarded in the sense which we have expressed above, they have come to be considered by many of the working classes as institutions in which they are entitled to be treated for trivial ailments. This is a misconception entirely unworthy of the British workman, and the sooner he is undeceived by the medical profession the better. He was never more able than he is to-day to offer proper terms for ordinary medical attendance on himself and family and to contribute a small subscription for the help of those whose extreme cases require exceptional skill and hospital accommodation. Is the thriving working man to be entirely exempted from the duty of such a subscription as he can afford to charities that are almost the monopoly of his order? On one important point, however, we entirely agree with Dr. VINRACE. The principle of compulsion must not be applied to working men. Their contributions must be voluntary, and the pressure of the employers and foremen must be restrained. Working men have the same right to freedom in supporting a medical charity which others have, and to make their contribution a matter of compulsion is to spoil it of its charm and to foster the misconception which if not corrected threatens to turn our hospitals into cheap dispensaries.

AN EXHIBITION AT ARCACHON.—We are asked to announce that an International Exhibition of Hygiene, Food, Commercial Produce, and the Industrial and Fine Arts will be opened at Arcachon, near Bordeaux, on July 15th. The exhibition will remain open until October, and all information can be obtained on application to the Direction de l'Exposition, Arcachon-les-Bains, Gironde, France. Arcachon is a thriving watering-place with a large *clientèle* and more than the usual local attractions, so that the founders of the exhibition look forward with some confidence to successful results.

Annotations.

"Ne quid nimis."

THE CALAMITY AT PARIS.

THE disastrous fire which occurred upon May 4th at a charity bazaar at Paris was a fatality peculiarly distressing in its surroundings. Loss of life is always a thing to be regretted, but how much the more in a case like the present, where the victims had assembled together to do their utmost to assist their poorer brethren and sisters. There are various theories as to the cause of the fire; but, however it arose, the flames spread with appalling rapidity, and in some twelve minutes about 150 persons lost their lives. Most of them seem to have been women, but the reports state that the remains found were so charred and disfigured that recognition was in most cases impossible. We can but offer our sympathy to the relatives and friends of the victims, and suggest that in some cases at least the cause of death would be suffocation and not burning, a death, therefore, unaccompanied by bodily pain; but the accident is a heart-rending one, and of the dead we can but say, "Quorum animis propicietur Deus."

THE TREATMENT OF HABITUAL OFFENDERS.

THE unfortunate people who continually reappear before the police magistrates and petty sessions on various minor charges have for a long time been the despair of the philanthropist and the social reformer. The law does not permit more than the infliction of a trivial fine or a few days' imprisonment, the inefficacy of which penalties is sufficiently proved by an early repetition of the offence. The opportunities provided by numerous "homes" and other benevolent agencies seem equally to fail in reclaiming these habitual offenders, and the principle of sentencing them to progressively increased periods of detention—a principle which has for long been advocated by the Howard Association—is at least deserving of trial. The Association argues that the correction of bad habits requires time, and that hitherto the victims of evil habits have been positively encouraged by a system of sentences which has rendered their reformation impossible, and has (at enormous and utterly wasted cost to the public) made them worse instead of better. These repeated short sentences have been strongly condemned by departmental committees of Government on English prisons and Scotch habitual offenders. The Scotch committee made it their chief recommendation that persons who have been three times imprisoned within one year should, on a fourth conviction in the same year, be deemed habitual offenders, and that if they are again convicted during the ensuing two and a half years they should, in addition to the usual brief sentence of imprisonment, be committed to an adult reformatory or labour settlement for a term of not less than twelve or more than thirty months. It has been found in the experience of all schemes of providing work for the vagrant and habitual offender classes that the majority of such persons will not work continuously unless compelled to do so. This has been the experience of the Dutch and Belgian beggar farms, and, in a great degree, of the Salvation Army farm at Hadleigh, and other similar establishments. There must be compulsion, and also detention for a period long enough to alter bad habits and form good ones. There is no prospect whatever of these labour settlements being made self-supporting, but they would, at least, be far cheaper than the ineffectual system hitherto adopted. The Association considers that the Hadleigh farm has been of great service to respectable and willing workers not of the class

of habitual paupers or vagrants, but that farms are unsuitable for habitual criminals, who inevitably corrupt one another; for criminals (as distinct from habitual petty offenders or misdemeanants) gradually cumulating periods of imprisonment are best, one or two years being added for each successive conviction. Habitual tramps and vagrants, and also the class of paupers who constantly discharge themselves from workhouses after a few days' stay, should be checked by compulsory detention for periods adequate to break them of their habits. First offences, or even occasional ones, should be dealt with compassionately, but habitual offences require reformatory discipline, perseveringly applied for adequate periods. Such are the recommendations of the Howard Association, a society which has made the diminution of crime a subject of special study, and the exertions of which in the cause of social improvement are universally acknowledged.

LITERATURE AND SCIENCE.

THE fact that Lord Lister was to preside at the annual dinner of the Royal Literary Fund gave quite a scientific flavour to the 107th anniversary celebration, and no doubt determined the presence at the table of many members of the medical profession. Among the medical men present may be mentioned: Dr. Barnes, Dr. Buzzard, Sir William Broadbent, Sir J. Crichton Browne, F.R.S., Sir Robert Craven, Mr. C. T. Dent, Professor Michael Foster, F.R.S., Mr. Pearce Gould, Dr. J. Gray, Mr. Hutchinson, F.R.S., Mr. G. H. Makins, Mr. Nettleship, Dr. George Ogilvie, Dr. J. W. Ogle, Dr. T. Oliver, Mr. H. W. Page, Sir William Roberts, F.R.S., Professor Sherrington, F.R.S., Dr. S. Squire Sprigge, Dr. Wilks, F.R.S., Sir John Williams, Dr. Theodore Williams, and Dr. G. Sims Woodhead. The speeches in every case rang changes on the connexion of literature with science, or the antagonism of literary work to scientific work. Lord Lister, in the chief toast of the evening, "Prosperity to the Royal Literary Fund," while acknowledging the debt that scientific men, as much as the rest of the world, owe to the author, disclaimed literary merit for his own writings, saying that he was a student of the book of nature, and that the value of anything that came from his pen was due to the grandeur of his theme and not to his treatment of it. The Bishop of Stepney, in proposing the toast of "Literature and Science," found that in the best journalism the two met harmoniously, however opposed they might be in other ways, the search for reality being here the common object of both. Mr. Traill, in responding for Literature, spoke wittily of the function of the critic as a surgical one, "not necessarily followed by the beneficent results with which the name of the chairman would always be associated." There was, he feared "no kindly healing process for a mortified vanity akin to the processes under which the aseptic wound united." Mr. Norman Lockyer responded for Science, and the Earl of Crewe proposed the Chairman's health in suitable terms.

THE APPRECIATION OF MEDICAL SERVICES.

WE have not often to complain of a want of liberality in the higher courts in their estimate of the value of medical service, but in the case of Douglas and Another *v.* Phillips, before Mr. Justice Cave and a special jury, we cannot refrain from such feeling. The plaintiffs, medical practitioners at Hounslow, claimed £105 5*s.* for medical attendance on the defendant, Miss Florence Phillips, who denied that the charges were fair and reasonable. The services and charges were briefly as follows: Consultation at surgery, 5*s.*; five journeys to Richmond at £1 1*s.* per journey; fourteen journeys to London—involving, we gather, a consultation with Dr. Herschell—at £3 3*s.*; twenty-four journeys to Hampton Court at £2 2*s.*; and a journey to London at midnight, £5 5*s.* On the face of it there is nothing unreasonable in these charges. On the contrary, they are moderate. Which of us, which of the jury that reduced this claim to £50 16*s.* 6*d.*, would like to undertake a journey to London at midnight for five guineas? The other journeys to London, which occupied as a rule five hours, were charged for at the rate of only three guineas. Journeys to Hampton Court, which took three hours, only two guineas; journeys to Richmond, which took two hours, one guinea. Several medical men testified to the general reasonableness of the charges. There was, of course, one medical man—all the way from Liverpool—to say that in his opinion the charges were rather high. And he seemed to weigh more with the jury than several others who rightly defended the charges made. The defendant had actually paid £70 altogether into court. Judgment was given for the defendant, the plaintiff to have the costs up to Dec. 4th, 1896, up to which date only £35 8*s.* 6*d.* had been paid into court. An order was made that the plaintiff should take £50 16*s.* 6*d.*, and the defendant take the remainder of the £70 out of court. We cannot think that such an estimate had the serious approval of the judge. Dr. Christian, the member of the firm who attended Miss Phillips, has done right in vindicating by his action the medical estimate of the value of time and service. We regret his unsuccess. But the profession and, we venture to say, men of other professions will accord him their sympathy and approval.

ANTI-VACCINATION AT GLOUCESTER.

THE anti-vaccination party at Gloucester have at last been made aware that they are not to have it all their own way, as they may have fondly imagined from the results of recent municipal and parochial elections. Indeed, the only wonder is that the citizens have been content to allow them to have so long enjoyed freedom from the criticism which their unwarrantable assertions with regard to the sanitation of the city invited. When, owing to the unprotected state of the children from long neglect in enforcing the law with respect to vaccination, small-pox spread in their midst, the anti-vaccinationists proclaimed loudly on all occasions that such neglect of vaccination had nothing to do with the outbreak, which, according to them, was solely attributable to the grossly insanitary condition of the city. This cry—promulgated by such leaders in the anti-vaccination cause as Lieutenant-General Phelps of Birmingham and Dr. W. R. Hadwen—has ever since formed the staple explanation of the Gloucester epidemic amongst those who had been most active in persuading the people to abstain from seeking the protection afforded by vaccination. The utter baselessness of the assertion was amply shown at the time of its first announcement by the city surveyor; but the anti-vaccinationists have continued to adhere to it, thereby damaging the interests of the city, which had suffered so much already from the epidemic. The occasion of the annual meeting of the Gloucester Branch of the Anti-Vaccination League on the 22nd ult. had been intended by the party to have shown to the world how deep a hold their tenets had gained amongst a community which had experienced the trial and suffering of an epidemic of small-pox. The meeting had been widely advertised, and the chair was occupied by Lieutenant-General Phelps, the President of the Anti-Vaccination League. Mr. Milnes, the champion of the cause, and Dr. Creighton, the medical advocate, whose attacks upon Jenner have proved that even a man of science may be blinded by prejudice, had come from London to support the chair and give their benison to the Gloucester stalwarts. The ranks of the latter have been recently reinforced by Dr. Hadwen himself. The citizens, however, were resolved that those who had defamed the city should not enjoy a monopoly of speech

on the occasion of this meeting, especially as supporters of vaccination had been directly challenged to reply to the criticisms on the city's sanitation, which had been so freely made. Accordingly, by handbills and posters, the true facts as to vaccination and the refutation of the statements of its opponents induced some to attend the meeting who had no sympathy with its objects. Dr. Bond, the energetic secretary of the Jenner Society, who had been specially challenged, appeared on the platform and obtained a brief hearing whilst he proceeded to demolish the pretensions of Dr. Hadwen to speak of the sanitation of a city in which he was so recent a resident. Another gentleman who essayed to defend Gloucester from the imputations cast upon it was "chucked out," only to re-appear, and after most disorderly scenes to obtain a brief hearing. But the proceedings were not suffered to continue, and disorder reigned supreme, so that the eloquence of Mr. Milnes was lost and the words of wisdom of Dr. Creighton were wasted. We commiserate these two gentlemen on their unfortunate experience, but we cannot say that we are at all surprised at the *fiasco*, which, indeed, was directly provoked by the attitude assumed throughout by the promoters of anti-vaccination in all their references to Gloucester.

THE UNREPORTED DEATH OF A SHIP-SURGEON AT SEA.

MR. S. MASON writes a letter to *Fair-play* which tells a remarkable story of the death of his friend, Dr. W. H. Brendon, on board the steamship *Umona*. The ship arrived in London on March 31st, and as Dr. Brendon's friends received no news from him or information about him they became uneasy, and Mr. Mason was asked to inquire for the missing medical man on April 6th. It so happened that the captain of the ship was in the office, and on being asked if he had had Dr. Brendon on board he replied "Yes." On being asked if he was still on board he replied that he was dead, that he had died on March 17th from dysentery, and was buried at sea on the 18th. On being asked why he or the shipping firm had not communicated the sad fact, he replied that they did not wish to alarm the family, and felt sure that some of the family would be making inquiries. An equally shaky basis of excuse was put forward on the ground of not having the address; but Mr. Mason shows by letters to Dr. Brendon that they had knowledge of his address. A brother had written to the firm to inquire. He was told that the ship had arrived, but no hint was given of the death of his brother. Such consideration for the feelings of a family is most peculiar, and is more honoured in the breach than in the observance. The facts would appear almost incredible if they were not vouched for in a published letter. We cannot imagine that such conduct is common among shipowners, but we give publicity to these statements so that they may, if possible, be contradicted, and, if not, that they may remain as a unique instance of how not to deal with news so sad respecting the medical officer or, indeed, the humblest passenger or member of the crew of any ship.

CASTRATION AND VASECTOMY IN HYPERTROPHY OF THE PROSTATE.

DR. J. W. WHITE, who introduced the operation of castration for hypertrophied prostate, in a lecture recently delivered states that as oöphorectomy was much abused a few years ago, so is this operation now,[1] and that a similar result in the treatment of appendicitis is threatened. He never encouraged the idea that his operation was a universal panacea. If the patient is not very old, retains his sexual power, has sound kidneys, and only a moderate amount of residual urine, the operation is out of the question and only catheterism is required. If pain is marked and resists small doses of bromide, belladonna, phenacetin, &c., that may be an indication for operation. In such cases vasectomy should be selected. If the residual urine reaches twelve ounces and if it does not diminish under catheterism, the dangers from backward pressure on the kidneys, increasing atony of the bladder, and cystitis are so great that vasectomy is again indicated. In patients with larger prostates, with eight or ten ounces of fœtid or muco-purulent urine, with frequent micturition, and pain on the introduction of the catheter, some operation—vasectomy, castration, or prostatectomy—is indicated. The younger the patient, the greater the sexual power, the sounder the kidneys, and the better the general health, the more the surgeon should incline towards prostatectomy. If the patient is somewhat older and the sexual power is becoming enfeebled vasectomy is to be chosen. Still greater age, with marked renal disease or great failure of health, indicates the same operation. If, however, with the greater age and distinctly lessened sexual power the renal and general conditions are good, castration promises the most benefit with the least mortality. In the worst cases, in which the prostate is enormous, the cystitis excessive, the bladder dilated and atonied, the retention absolute, the kidneys inefficient, and catheterism difficult and occasionally impossible, any operation involves risk. But this must be taken. Castration in these cases is the best procedure. It will occasionally fail, but often the improvement is marvellous.

[1] University Medical Magazine, April, 1897.

A MIDWIFE CAUTIONED.

AN inquest was held at Littlehampton on Friday, the 23rd ult., by Mr. F. W. Butler on the body of Clara Dearing, aged thirty-five years, who had died on the morning of that day. She had been confined of a dead child on the preceding Wednesday. The patient had engaged a midwife to attend her in her confinement. According to the husband's evidence the deceased was well up to the Tuesday evening. It appears that the midwife had seen the deceased on the Saturday and also on the Tuesday before the confinement. Labour apparently began early on the Wednesday morning; the midwife attended as soon as she was summoned, and it seems that when she saw the case she advised that a medical practitioner should be sent for. Mr. Lapthorn attended and gave chloroform, and the patient was delivered of a dead child. In his evidence he said there was a great deal of hæmorrhage, but it is not clear whether this occurred before or after delivery. The patient died early on the Friday morning. Mr. Lapthorn made a post-mortem examination, and as a result of it gave it as his opinion that if medical assistance had been obtained on the Friday or Sunday previously to the confinement the patient would have been saved. The jury found a verdict in accordance with the medical evidence, and suggested that the midwife should be cautioned as to her attendance on such cases in future. Our readers will see that the information given as to the facts of the case is not sufficient for us to form any opinion as to its real nature. Perhaps Mr. Lapthorn will tell us more about it, and especially what the reason was why medical assistance should have been summoned earlier.

EGYPTIAN PRISONS IN 1896.

MANY references have from time to time been made in our columns to the important reforms introduced into the Egyptian prison system since Crookshank Pasha became Inspector-General of Prisons in 1883, and the circumstance that his retirement from that important position has been announced gives additional interest to his official report for the year 1896. During that year the work of the department was carried on under unusual difficulties, owing, firstly, to all grants for the improvement of existing

prisons or the building of new ones being withdrawn early in the year on account of the Dongola expedition; secondly, to the want of sufficient accommodation for the continually increasing number of prisoners; and, finally, to the outbreak of cholera during the hottest summer months in seventeen overcrowded central gaols. There was a total of 7954 male prisoners confined in twenty-five principal gaols, seventeen of which were invaded by cholera, while eight remained exempt, and among this large number of persons there were only 116 cases of cholera, with 70 deaths. Not a single case of the disease occurred among the female prisoners, and the Inspector is of opinion that this is due to the fact that they are fed by the department, whereas at all but two of the prisons for males the prisoners' food is supplied by their friends and relatives. Whenever cholera broke out in a prison relatives were strictly forbidden either to visit or to bring in food and clothing for a period varying from one to two months, according to the existence of cholera in the neighbourhood, and invariably the disease was stamped out of the prison in a few days. During 1896 there were over 47,000 unconvicted and convicted male prisoners admitted into the central gaols, and during the same period 36,000 were discharged. Female prisoners were very much less numerous than male prisoners.

MEDICAL MISSIONS IN CHINA.

ALTHOUGH the unwillingness of the Chinese to receive instruction from foreign residents only too often shows itself in outbreaks of murderous violence, it is gratifying to find that the work of the Medical Missionary Association appears to be making progress in some of the towns. At the annual meeting of the Association in Exeter Hall, on May 3rd, Mrs. Bishop, who had been three years in the Far East, stated that at Mukden, the capital of Manchuria and politically the second city of China, the Emperor's uncle and another mandarin caused it to be publicly proclaimed that they had received medical treatment at the United Presbyterian Hospital, an example of aristocratic preference for foreign over native methods which is likely to be beneficial all round. Mrs. Bishop seems not to have been altogether favourably impressed with the sanitary condition of some of the mission hospitals she visited in China, but allowance must be made for the great divergence between Eastern and Western opinion in regard to such matters and also for the danger that patients might be estranged or scared away by too abrupt a departure from their accustomed habits. Even in Bombay, where for more than a hundred years the British Government, possessed of absolute power, has had as free a hand as it is possible to have in dealing with Asiatics, the reports of our correspondents show that public sanitation is still in a rudimentary stage.

DUNLOP TYRES AND PRACTITIONERS' CARRIAGES

OF the comfort of the Dunlop tyre as applied to an ordinary carriage there can be no doubt, and the chief question therefore for those who are anxious to use them is as to whether they will wear. Of course, they require care in using and are somewhat expensive in the first instance, but against these items on the debit side must be set various points to their credit. We have recently received two very opposite accounts of the lasting powers of these tyres, which we here lay before our readers. The first is the experience of a practitioner in Sheffield. He allows that, having procured a set of the tyres in question, he found an enormous increase of comfort from the absence of vibration and jolting, and in addition that the body of his carriage, a light coupé brougham, was saved a proportionate amount of wear. But, on the other hand, he found that they frequently burst and, although mended, soon gave way again; that they threw up a quantity of mud, which injured the paint of the carriage; and that the brakes, though efficient, soon wore out. The other experience comes from a medical officer of health in a hilly part of Wales. He had the pneumatic tyres fitted to an ambulance brougham, which in eight months travelled over 750 miles of hilly, rough ground without a puncture and with extreme comfort to the sick transported thereby. The brake blocks wore out in seven and a half months, but the tyres themselves were but little worn by the brakes, although much cut by the roads. This latter seems a pretty severe test, and we are unable to account for the disastrous experiences of the Sheffield practitioner except by assuming that he got a faulty tyre, for even with the greatest care anything manufactured sometimes fails, or else that the tyres were not properly inflated before use and so got nipped between the road and the wheel. The increase of comfort is so great that though it may not be worth while for a medical man to run the risk of having his carriage laid up for long spaces of time, as happened to one who tried the tyres, yet in the light of the Welsh experience they would seem to be quite worth a trial.

HERNIA OF THE BLADDER.

ALTHOUGH hernia of the bladder was recognised as long ago as 1520, when it was met with by Verdier, yet it has been satisfactorily described only within the last few years. In 1895 fifty-eight cases were collected by Curtis, and in March of this year Dr. Gibson published in the *New York Medical Record* a valuable paper on the subject, containing particulars of forty-five additional cases. From this paper we gather that nearly 25 per cent. of these herniæ were of the femoral variety, and that in more than half of the cases the patients were over fifty years of age. The herniated viscus is often not recognised until it has been opened, and in such cases the mortality is high, for even after deducting those deaths which could not be attributed to the wound of the bladder a fatal result followed in 12½ per cent. It is very probable that the condition is by no means so rare as it is usually thought to be. Dr. Gibson also points out the importance of recognising that traction on the sac of a hernia may draw the bladder into the hernial orifice, and so expose it to the risk of being wounded in an operation.

CHLOROFORM ADMINISTRATION IN WARSAW.

ACCORDING to a paper published in a Russian surgical journal by Dr. Soloveischik chloroform has been administered in 500 cases in Professor Tauber's clinic in Warsaw by Junker's inhaler—Krohne and Sesemann's pattern—with very satisfactory results, these being arranged in somewhat elaborate tabular form. Complete insensibility was obtained in male patients in 12· minutes, and in females in 9·7 minutes, taking the average of all the cases. In four females the time required was less than five minutes. In thirty females and ten males five minutes was sufficient. No female required more than twenty-five minutes, but three males required half an hour and one forty minutes. The maximum quantity used to obtain complete anæsthesia was 5 drachms for males and 3½ drachms for females. They were all adults with the exception of seven boys and eleven girls under fifteen years of age. The average quantity of chloroform used in producing complete anæsthesia was for males 2·24 drachms, and for females 1·64 drachms, calculating the fluid drachm as marked on the bottle as equal to 5·3 grammes, instead of Dr. Soloveischik's figure, which is evidently based on the assumption that the marked drachms are equivalent to Russian drachms by weight. The mean quantity used per minute during complete anæsthesia

was found to be 0·54 gramme, which compares very favourably with the figures given by Gurlt,[1] according to whom when Esmarch's mask is used a gramme of chloroform is required per minute, and when Kappeler's apparatus is employed 0·6 gramme. In one case (empyema) cessation of respiration occurred after only half a drachm had been given. In another case the excitement was so great that after twenty-five minutes, during which half an ounce had been given, Esmarch's mask was substituted for Kappeler's. After ten minutes' further administration breathing ceased, and artificial respiration was resorted to with a successful result. In four cases only was there any vomiting, and in these only towards the end of the operation.

M. HAFFKINE.

OUR readers are well acquainted with the enthusiastic spirit in which M. Haffkine has carried on his labours in India while endeavouring to deal with such diseases as cholera and bubonic plague. We are glad, therefore, to be able to congratulate him on the fact that the Government of India, recognising the arduous and valuable nature of his recent work in connexion with the plague, have sanctioned the grant of a monthly salary of Rs. 2000 to him instead of the allowances hitherto given. This arrangement is to have a retrospective effect from the date on which he began work in Bombay.

VOICE-TRAINING.

THE Society for Physical Voice-training has received favourable notice in the *Cambridge Review* for April 29th. Our contemporary asks, "Why should we not have a professor of rhetoric?" We do not think the present a very good opportunity for the suggestion of new professorships or readerships at Cambridge, having regard to the admitted poverty of the University, but we certainly think that the proper cultivation of the voice is a subject upon which all educational bodies would do well to take thought. Every educated man ought to be able to speak and read aloud in a way that is comprehensible, and not only comprehensible but pleasant, to his hearers, but as a matter of fact the ordinary Englishman can do neither the one nor the other.

"CHURCHED TWICE IN ONE WEEK."

OUR attention has been directed to a paragraph in the *Manx Church Magazine* for January, 1893. An extract from a parish register dated 1630 is there given as follows: "1660. Rob Cottier's wife was delivered of a child which was baptised upon the Monday and she came to the church to be churched upon the Wednesday next after, and after returning home she fell in labour and was delivered of another child, and came to be churched upon the Saturday next after in the same week. Churched twice in one week. This I certify to be the truth.—Edward Crow, minister." It will be seen that the exact interval between the two confinements is not given. For all the register directly says to the contrary, the child whose baptism is mentioned might have been a year old, or even a person "of riper years"; the first churching might, also, have been left somewhat in arrear; but evidently the probability is that Edward Crow was somewhat struck with the fact that after the birth of a mature, or premature, infant a woman, without renewed coitus, may in the course of one, two, or three months give birth to another child, which may be mature or premature. There are three classes of such cases. In twin pregnancies after one child is born the other may be retained some weeks or months and then be born; again, a woman may have a double uterus, in each side there may be an ovum, and each side may expel its fœtus at a different time; lastly, it may be a genuine case of superfœtation. Coitus taking place in the early months of pregnancy, a second ovum may be fertilised, and the children be born at different times. A case recorded by Dr. Bonnar, quoted in Playfair's Midwifery, is a good example of this class. A child was born on Sept. 12th, 1849, and another on Jan. 24th, 1850—that is, about sixteen weeks after the first. Both children survived, so that the second child could not have been conceived after the birth of the first, or we should find a fœtus of about sixteen weeks' development born alive and surviving, which is impossible. On the other hand, the case could not be one of twins, the first of which was expelled prematurely, because the first born who survived would be, on that hypothesis, of only about five months' development.

[1] Archiv für Klinische Chirurgie, 1891 and 1893.

FORTY YEARS OF OFFICE.

MR. SAMUEL STRETTON of Kidderminster has resigned his appointment as medical officer to the workhouse after forty years' service. Forty years is a very large slice out of a man's active life—it is, in fact, a longer time of working activity than the average medical man enjoys—but during all this period Mr. Stretton has devoted himself with enthusiasm to the care of the sick and aged poor of Kidderminster. Familiarity with the duties did not make him weary of them, so that we cannot be surprised that the guardians have received his resignation with outspoken regret, attributing to him the present excellent sanitary condition of their workhouse. We congratulate Mr. Stretton upon the reputation which he has thus won among his fellow townsmen for intelligent and kindly work.

THE RESOURCES OF CAMBRIDGE UNIVERSITY.

DR. BUTLER, the Master of Trinity, has written to the *Times* concerning the pecuniary position of Cambridge University. The precariousness of this position was pointed out in our columns some weeks ago[1] in an article founded upon a circular letter addressed to the press by the Duke of Devonshire, the Chancellor of the University. His Grace's letter concluded, it may be remembered, with the statement that "the re-endowment of the University in respect of many of its departments is a pressing necessity," while Dr. Butler's letter shows that in many of our great public schools practical re-endowment has taken place during the past sixty or seventy years, so that the ancient University has fallen behind the institutions whence she derives a large proportion of her raw material. In fact, the raw material reaches the University in a condition of elaboration almost higher than the University can maintain it at without sacrifices on the part of the executive and all concerned with the administration that should not be expected and cannot be continued. And even so the fall behind has been hardly prevented. This fact comes home to medical graduates more than to any section of the University, as it is in different departments of natural philosophy that an enormous increase of work has been coincident with an equal depreciation in income. One of the most remarkable features connected with the history of the University has been the rapid development of the medical school and the ancillary schools of anatomy and physiology, and now that it has become apparent under what grave pecuniary stress so much admirable work has been accomplished we are certain that the medical profession, whether connected with the University or not, will see that Cambridge has justified beforehand and fully any claim that it may make upon the public for relief. The medical profession may well bring their influence to bear on the public mind in favour of a generous response, should the letters of the Duke

[1] THE LANCET, April 24th, 1897.

of Devonshire and Dr. Butler be followed in the near future by any sort of appeal.

THE ILLNESS OF THE DUCHESS OF TECK.

THE Duchess of Teck's illness has caused widespread anxiety proportional to her extreme personal popularity. We are glad to be able to inform our readers that Her Royal Highness, upon whom an operation was performed on Friday evening, April 30th, by Mr. Herbert W. Allingham, after consultation with Mr. T. Smith and Dr. Wadd, has since progressed favourably.

ALCOHOLIC PARALYSIS IN A CHILD.

AN account of a very interesting and important case was published some months ago in the *New York Medical Journal* by Dr. Herter. The patient was a child, aged three years, who had taken twelve ounces of whisky, and who very soon after lapsed into a condition of stupor which lasted, with variations, for a couple of months. Frequent convulsions occurred during this time, usually general, but occasionally restricted to the left side. Paralysis of the right side also developed, affecting the arm more than the leg, and contractures took place with muscular atrophy and loss of Faradaic excitability in the muscles. There were also strabismus, occasional sickness, and irregular temperature, due to the development of a slow lobar pneumonia. After an illness lasting about four months complete recovery took place. The case is very interesting on account of its unusual character and the many cerebral symptoms suggesting meningitis which developed, and Dr. Herber is to be congratulated upon his success in the diagnosis and also in the treatment of the condition.

THE CAUSATION OF INSANITY.

THE *Times* of Saturday, May 1st, in alluding to the Holloway Sanatorium, contains the following remarks based upon the annual report of the medical superintendent, Dr. S. Rees Philipps: "Worry was, as usual, the most potent cause of insanity; alcoholic intemperance played a very secondary part. Dr. Clouston, of the Morningside Asylum, Edinburgh, had convinced himself that more insanity was due to alcohol than any other cause. Dr. Philipps' observations tended to show that in England alcoholic intemperance was as often a result as a cause of insanity." These are startling assertions, and the opinions here expressed are undoubtedly opposed to the views held by most alienists. The term "worry" is evidently used in a very comprehensive sense, and seemingly embraces nearly all the causes of insanity denominated "moral" in the tables of the Medico-Psychological Association. Regarded from this standpoint alcohol may rank as a less important cause, but it is generally believed that alcohol and heredity bulk very largely in the causation of insanity. The view that alcoholic intemperance is as often a result as a cause of mental disease will not, we think, meet with much support.

MEDICAL MEN AND HOSPITAL BOARDS OF MANAGEMENT.

THE power for good which may be exercised by timely action on the part of a hospital staff has received practical illustration at Huddersfield. Although the accommodation of the infirmary there has been for some time inadequate, and even behind the times, there was a disposition on the part of the town to overlook its claims to share in any scheme for celebrating the Queen's Diamond Jubilee. Jealous of the welfare, and alive to the needs, of their infirmary the members of the honorary staff addressed a cogent but temperate letter to the local press in support of the infirmary's claim to recognition. But, although the commemoration of Her Majesty's reign was the ground for the response to this appeal, it came not from the townspeople as a whole, but from Mr. Hildred Carlile, who has sent a cheque for £8000 to the President of the infirmary. With this munificent donation the board has now a sufficient sum in hand to allow the additions to, and alterations of, the infirmary to be carried out forthwith. We congratulate the medical staff on the share they have had in conducing to this happy result. The munificence of the generous donor should live long in the hearts of those in the district which this infirmary serves, and other hospital boards may learn the lesson that they will be gainers by closely cementing their relations with the members of their staffs, and by giving them a share and voice in the management of their hospitals with a more generous hand than is sometimes done. The services rendered by hospital physicians and surgeons in their professional capacity surely entitle them to seats on the boards of management, whilst a staff working harmoniously with the lay managers may exert an influence and conduce to such a result as that which is announced at Huddersfield.

A CHINESE ENVOY IN QUARANTINE.

INFORMATION reaches us to the effect that amongst the passengers of the mail steamer *Empress of China* is Chang Yui Huan, the Special Envoy of the Emperor of China to the Diamond Jubilee celebration, and that the steamship is in quarantine at Victoria, British Columbia, on account of small-pox having occurred on board. The envoy protests against the imposition of quarantine upon one who is not under the control of the Colonial Government or the local authority, and he is stated to have forwarded his protest both to Lord Salisbury and to the Emperor of China. We rather doubt whether the envoy has any real remedy as to this. Vessels belonging to foreign Governments, such as men-of-war and transports, are generally exempt from the control of local authorities, but if the vessel is not one of this class, and it goes to a country where quarantine restrictions are applied, we know of no exception as regards individuals on board. Then, again, it is said that the envoy objects to having to undergo disinfection, and that he has announced that he will resist it by force. We hope, for the sake of the Colonial authorities, that no proposal has been made to disinfect an individual who is not actually suffering from disease. The disinfection of individuals is a thing of the past, and has no meaning in the light of modern scientific methods, except, for example, when a convalescent from such a disease as scarlet fever takes baths to rid his skin of desquamating epithelium. The story altogether savours of a past generation and much of it may admit of being explained away.

WE regret to learn of the death, at the age of sixty-five years, of Dr. H. Vandyke Carter, honorary surgeon to the Queen and Deputy Surgeon-General of the Indian Medical Service, which took place on May 4th at Scarborough. Dr. Carter's contributions to pathology and medicine are widely known, especially in such subjects as urinary calculi, relapsing fever, leprosy, and parasitic skin diseases. His researches on mycetoma threw considerable light on the nature of a disease which has since been closely identified with actinomycosis.

THE tenth annual Cookery and Food Exhibition will be opened at Niagara Hall, St. James's-park, S.W., on May 12th, by the Right Hon. the Baroness Burdett-Coutts, accompanied by Lord and Lady Methuen.

THE Conversazione of the Medical Society of London will be held on May 17th in the society's rooms, 11, Chandos-street, at 8.30 P.M. Mr. Edmund Owen will deliver the Oration.

The Lancet Special Commission

ON THE

METROPOLITAN WATER-SUPPLY.

XI.[1]

EAST LONDON WATERWORKS COMPANY (*Continued*).

Present State.—General Condition.

THE East London Waterworks Company supplies Shoreditch, Haggerston, Stepney, Limehouse, the Isle of Dogs, Bow, Bromley, Homerton, Stratford, East and West Ham, the Victoria and Albert Docks, Leytonstone, Wanstead, Woodford, Buckhurst-hill, High Beach, Waltham Abbey, Chingford, and Walthamstow. The area of supply is situated immediately to the east of that of the New River Company. The sources of supply are (1) the Thames near Sunbury; (2) gravel beds in the parish of Sunbury; (3) the River Lea; and (4) deep wells at Waltham Abbey, Chingford, Walthamstow, and Lea Bridge. The stations of the Company indicated on the map are A, Sunbury (intake and pumping-station); B, Hanworth (reservoirs, filter beds, pumping-station, and arrangements for collecting water from the gravel); C, Hornsey Wood (reservoir); D, Waltham Abbey (well and pumping station); G, Chingford (well and pumping station); H, High Beach (reservoir); I, Buckhurst Hill (reservoir); J, Hagger Lane (reservoir); K, Walthamstow (reservoir, well, and pumping station); and L, Lea Bridge (well, pumping station, and filter beds). There are also three wells under construction. Of these stations two are situated in the valley of the Thames, far away from the others. The remaining stations are situated in the valley of the Lea, in the district supplied by the Company. The Thames stations are Sunbury and Hanworth.

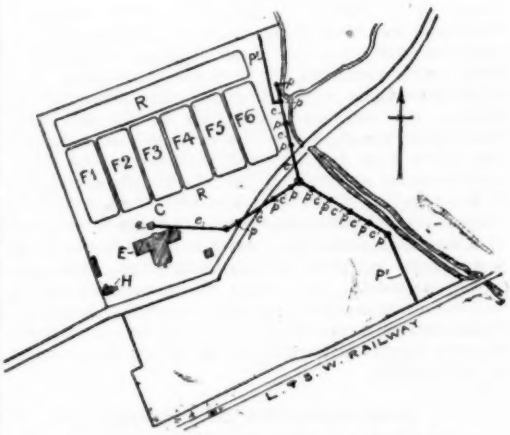
Sunbury (see A on Map).—The station at Sunbury consists of an intake from the Thames and pumping machinery to force the water to the station at Hanworth. The intake from the Thames is situated on the Wheatley's Eyot. This island is in the parish of Walton-on-Thames, in the county of Surrey, but is situated much nearer to the Middlesex bank of the river than to the Surrey bank. The stream which divides it from the Middlesex bank is only twenty-one yards across, and the great bulk of the water of the Thames passes between the island and the Surrey side. The height of the water at the point of intake is 28 ft. above ordnance datum. The East London is the only metropolitan company which takes water from the Thames above Sunbury lock. The intake is 20 ft. in width and 10 ft. in depth. It is guarded by a grating formed of iron bars, 1¼ in. square, placed anglewise. The spaces between the bars are about ¾ in. in width. These bars form the only screen through which the water passes; there is no wire netting at the intake. From the point at which the water is taken from the Thames three brick culverts pass to the backwater which divides the island from the mainland. The water is conducted under the backwater by three 48 in. iron mains to the mainland. From the bank the water is conducted through three brick culverts into an oval well 18 ft. in length and 12 ft. in width. From the well two egg-shaped culverts pass to the engine wells.

Engine-house.—The engine-house is built of brick. The water is pumped by two single acting Bull engines with 54 in. cylinders, which work plunger pumps of which the diameters are 45 in. and the stroke 9 ft. Steam is generated by four Cornish boilers, which work at a pressure of forty pounds. The water is pumped to the reservoir at Hanworth, a distance of about two miles, through a 36 in. main, which passes along the main roads. At this station there is a stand-pipe 40 ft. in height. When the works were first started here the water was pumped to a cistern 12 ft. in diameter and 20 ft. in depth, which was placed in a water tower, and from this cistern the water flowed by gravitation to the reservoir at Hanworth. The present arrangement is that the water is pumped direct to Hanworth and a stand-pipe is used to equalise the pressure, acting as an air valve. A cottage for a caretaker is situated at this station.

Hanworth (See B on Map and Fig. 1).—The station at Hanworth is situated in the parish of Sunbury, on the borders of the parish of Hanworth. It is called the Hanworth Station by the East London Waterworks Company to distinguish it from the one on the banks of the river at Sunbury which has been just described. The station at Hanworth consists of a reservoir, filter beds, pumping arrangements, and a system of underground works used for collecting water from the sand.

Reservoir (see Fig. 1, R).—The reservoir is 775 ft. in length and 116 ft. in width. The bottom and sides of the

FIG. 1.



Hanworth station. R, Reservoir. F 1 to F 6, Filter beds. C R, Covered reservoir. E, Engine-house. H, Engineer's house. P', Perforated pipes for the collection of gravel water. *p p*, Perforated iron piles. *c c c*, Culvert. *e*, Engine-house for pump taking gravel water to C R.

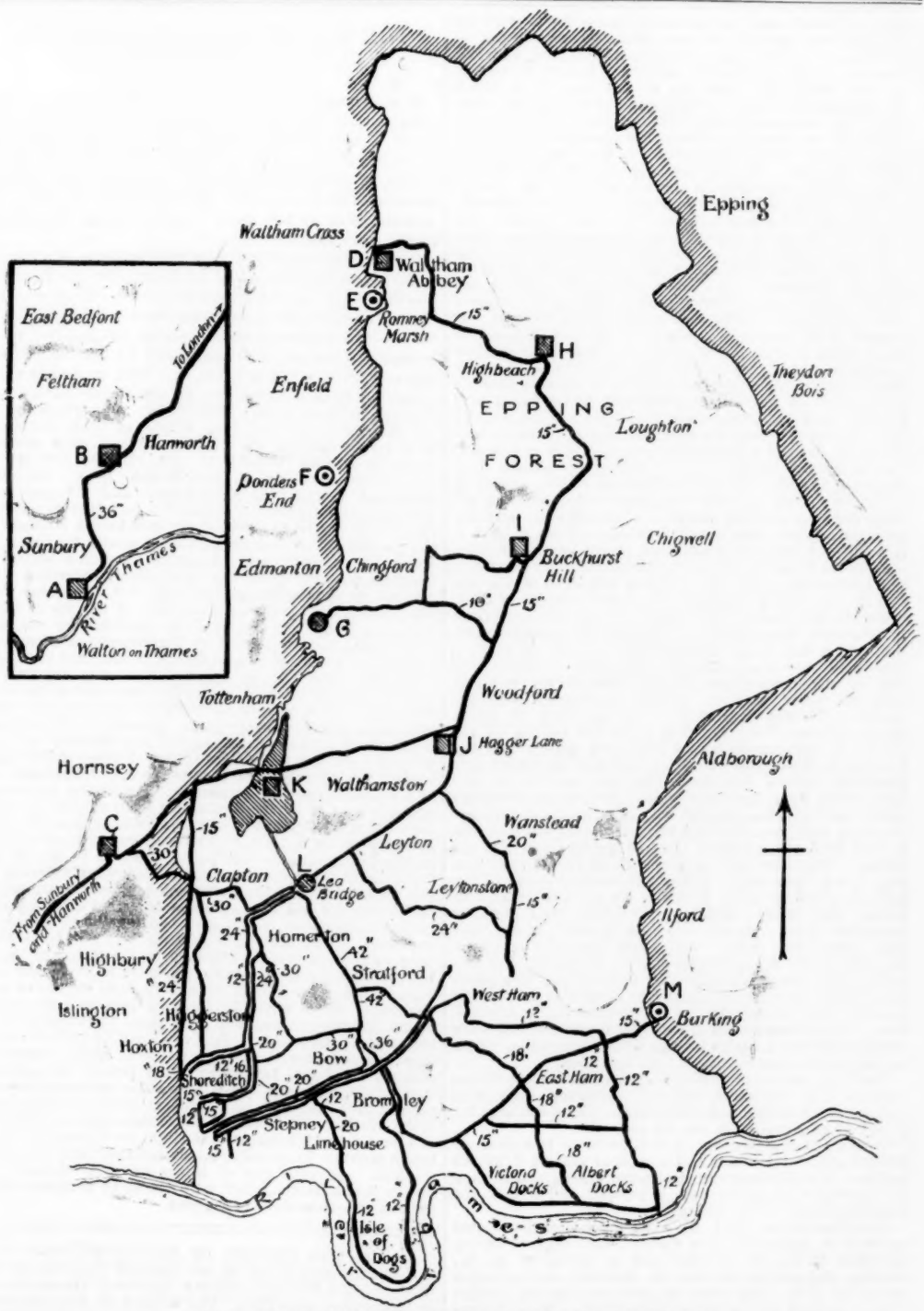
reservoir are cemented and the sides lined with brick. The sides are not vertical, but slope slightly (1 to 4). The reservoir has an available capacity of 5,000,000 gallons. It is supplied from Sunbury with unfiltered Thames water, and the water passes from it to the filter-beds.

Filter beds (see Fig. 1, F 1 to F 6).—There are six filter beds, which have a total area of five acres. The sides are built of concrete and faced with brick. The composition of the filter beds is as follows. At the bottom a layer of 12 in. of large stones is placed, next a layer of 6 in. of hoggin—that is to say, small stones about the size of peas—above this is a layer of sand 2 ft. 3 in. in depth, when the filter bed is first made. When the sand is scraped off for cleansing purposes the thickness is gradually diminished until the layer of sand is about 1 ft. 9 in. in thickness. The floor of the filter bed slopes slightly towards the culvert, which is placed in the centre. The culvert is of circular form, 3 ft. in diameter, and has a row of perforated bricks level with the floor of the filter. Through these perforations the filtered water passes.

Cleansing filter beds.—As a rule, one filter bed is cleansed each week, so that on an average each filter bed in use is cleansed once in six weeks, or, to put it differently, a filter is allowed to work for about five weeks. During the early summer, however, it is necessary to cleanse the filters much more frequently. There is at this time always a great and rapid growth of weeds, which block the filters, and this makes it necessary that they should be cleansed at the end of a fortnight, or even at the end of a week. The sand is washed by a stream of water from the main at a pressure of about 10 ft. The water which has been used for washing the sand passes to a small pond on the outskirts of the property, where, after it has been allowed to stand in order to deposit its impurities by sedimentation, it passes into a neighbouring ditch.

Underground water.—The arrangements for the collection

[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., and X. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, 24th, and May 1st, 1897, respectively.



THE EAST LONDON WATERWORKS COMPANY.

The shaded outline with the northern bank of the river defines the area supplied by the Company. Wells are marked as shaded circles, reservoirs are marked as shaded squares. The dark lines show the course of the principal mains, the diameters being marked in inches. A, Sunbury, intake and pumping station. B, Hanworth, reservoirs, filter beds, pumping stations, and arrangements for collecting water from the gravel (see Fig. 1). C, Hornsey Wood, reservoir. D, Waltham Abbey, well and pumping station. G, Chingford, well and pumping station. H, High Beech, reservoir. I, Buckhurst Hill, reservoir. J, Hagger Lane, reservoir. K, Walthamstow, reservoir, well, and pumping station. L, Lea Bridge, well, pumping station, and filter beds. E, F, and M, three wells under construction.

of underground water at Hanworth station differs from the arrangements which have been described as existing at the stations of the Chelsea and Southwark and Vauxhall Companies (see articles III. and V.). It may be best to go into some little detail as to the manner in which the underground water is collected, because, as far as we know, the arrangement here adopted does not exist elsewhere, or, at any rate, it was first carried out here, and was invented by the engineer of the East London Waterworks Company. It will be necessary for the sake of clearness to briefly describe the conditions of the ground here met with in order to explain how it is that the arrangements made are the best that could have been adopted. The story of the origin of the works is briefly as follows. When excavations were made at this station it was found that under 3 ft. of alluvial soil there was a layer of gravel about 18 ft. in thickness. The lower part of this gravel was full of water, which, indeed, gave a good deal of trouble when the original works were being carried out here. It seemed to the engineer of the company that it would be worth while to find out whether this water was of good quality for drinking. It proved to be of good quality, and it was therefore determined to collect it. The fact that the lower layers of gravel were filled with water would have caused a good deal of trouble in laying pipes in the ordinary way, because it would, of course have been necessary to keep the water pumped whilst the excavations were in progress. The impervious nature of the underlying London clay suggested the advisability of making use of this quality by making a culvert in it for the purpose of conducting the water from the overlying gravel to a central well. In order to carry out this idea the method adopted was as follows. A number of hollow iron piles with perforations in the sides were driven from the surface of the ground right down into the London clay, so that only about 2 ft. or so of the pile remained projecting above the ground, and a length of 38 ft. was under the ground. A number of these piles were driven in at regular intervals in straight lines in the direction of a well which had been already sunk (see Fig. 1, *p p p*). The well was then pumped dry and a culvert was dug in the London clay in the line of the piles, so that the lower part of the piles projected into the culvert (see Fig. 1, *c c c*). The condition of things which obtained then was that from the surface of the ground to the culvert hollow iron piles passed, and the lower parts of the piles which projected into the culvert were filled with London clay, which they had met with as they were driven down into the culvert—that is to say, the lower part of each pipe was plugged with a layer of London clay. This clay being removed from below the water was then able to flow from the saturated layer of gravel down into the culvert. The culvert led to a well in an engine-house (see Fig. 1, *c*), from which it was afterwards pumped to the covered reservoir (Fig. 1, CR). By an arrangement of valves the water contained in each pile can be prevented from passing into the culvert below, and then after the water has been pumped out from the culvert its whole length can be explored. The perforated iron piles which collect the water from the gravel and conduct it to the culvert, which is situated in the clay beneath, were constructed for the purpose which they subserve. The arrangements are simple, ingenious, and carry out perfectly the intention for which they were made. There are altogether about twenty of these iron piles.

Small engine-house (see Fig. 1, *c*).—Another engine-house contains two compound surface condensing centrifugal engines of about 20 horse-power each. These are used for pumping the gravel water into the reservoir.

Covered reservoir (see Fig. 1, C R).—There is a reservoir covered with brick arches and capable of holding 2,500,000 gallons. Into this reservoir the filtered water gravitates and the water from the gravel beds is pumped, and from it the water is pumped to Finsbury-park.

Engine-house (see Fig. 1, E).—The water from the covered reservoir is pumped by three Cornish beam engines, having cylinders 84 in. in diameter and a stroke of 11 ft., working plunger pumps 36 in. in diameter, and having a stroke of 9 ft. The steam is generated by ten Cornish boilers, working at a pressure of 40 pounds. These engines pump filtered water and water from the gravel to the reservoir in Finsbury-park, a distance of about nineteen miles. The main through which the water passes is 36 in. in diameter.

(To be continued.)

THE BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

A CONVERSAZIONE was given by the members of this comparatively new but fast-growing society at Limmer's Hotel, Conduit-street, London, W., on April 28th. An exhibition of drugs, meteorological instruments, and photographs of balneo-therapeutical appliances was greatly appreciated by those present. The attractions of the evening were enhanced by the music supplied by the Blue Zouave Ladies' Orchestra.

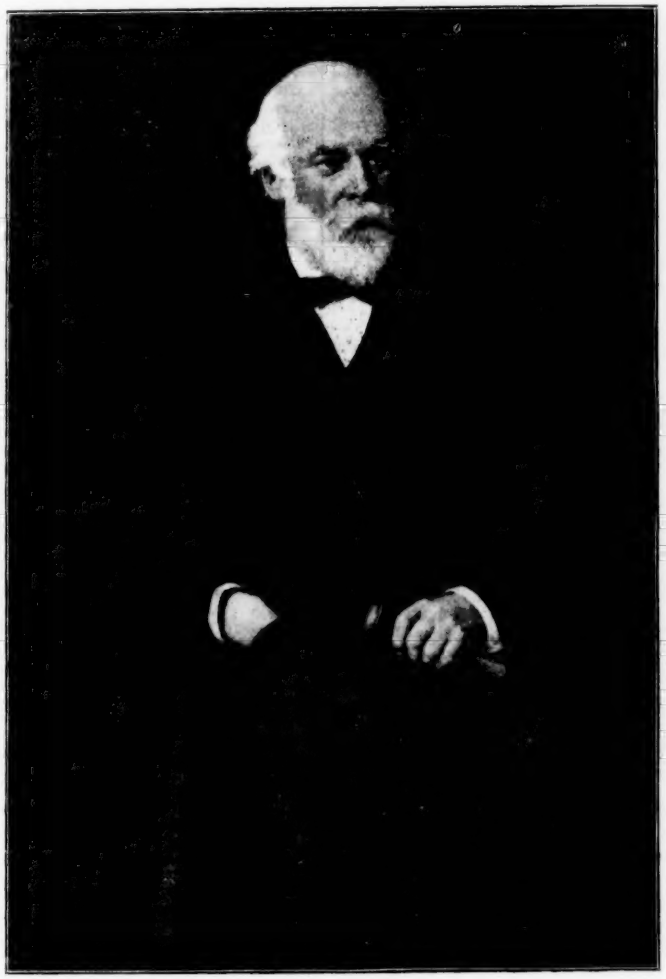
Previously to the reception by the President (Mr. Andrew S. Myrtle, M.D. Edin., J.P., of Harrogate), Sir DOUGLAS POWELL delivered an interesting address, which took the form of an extremely entertaining *résumé* of the progress of climato- and balneo-therapeutics during the past few years. Speaking of the origin of the society he said he believed that it was founded in response to a wish or feeling which originated from a Committee of the Royal Medical and Chirurgical Society in 1889, under the presidency of Sir Edward Sieveking. The efforts of that committee were very successful in bringing forward most valuable information with respect to the climatic and balneo-therapeutic resources of the British Isles. He congratulated the British Balneological and Climatological Society upon its growth and upon the fact that its roll contained the names of some of the best-known members of the profession. It was an additional matter for congratulation, he thought, that the society numbered among its members, not only those who were strictly concerned with climato- or balneo-therapeutic work, but also those who, like himself, had no special knowledge of climate or baths except such as was derived from experience or research. Sir Douglas Powell referred to the importance of making a correct diagnosis of a case before it was sent to a spa, although it might often happen that a case was sent to a bath in a state of what he called suspended or tentative diagnosis, with a view to its being carefully watched for a time under treatment at the bath. Speaking of the exercise treatment of cardiac diseases he said that discredit had been brought upon the method by reason of many cases being treated too severely; many cases sent to baths were not in a condition for such treatment. The Schott treatment, too, had been of immense value in a small minority of carefully selected cases, but even this treatment from the very publicity which it had acquired was, he ventured to say, rapidly losing ground. He hoped it would be one of the functions of this society to have a controlling influence in this matter. Whilst the movement and bath treatment of cardiac disease had been carefully organised of late years, insufficient attention, he thought, had been given to the rest treatment in that and other diseases. At all events, such cases as anæmia, cardiac affections in the early and ingravescent stages, and pulmonary affections in the acute and ingravescent cases benefit by a very rigid degree of rest treatment. Much might be done, he said, to improve our health resorts—our southern ones more particularly—with regard to this treatment. What was wanted was more "sun-traps," more balconies with glass screens which would not obstruct the light, but which would protect the patients from winds, and open spaces where the patients might be exposed to the sunshine and sheltered from the inclemency of the weather. He instanced the Madeira-walk at Brighton as a most valuable example that might be followed by other health resorts. Frequently placed sheltered rests were also required. In these sort of things we were outdone by foreign health resorts, which were not to be compared with our own at certain times of the year.

H.R.H. THE DUCHESS OF ALBANY will open the new Convalescent Home of the National Hospital for the Paralysed and Epileptic (Albany Memorial), Queen-square, on Wednesday, June 16th. The home is at East Finchley, and has been provided for a class of patients inadmissible to every other convalescent institution in the kingdom. Only a small balance of the cost remains to be collected, and the board hope to be privileged to inform Her Royal Highness that the home is opened free from debt.

Obituary.

JAMES ANDREW, M.D. OXON., F.R.C.P. LOND.

ON April 21st, at Tavistock, James Andrew entered into a well-earned rest, aged sixty-seven years. He was born at Whitby, of which place his father was for thirty-four years perpetual curate. He was the youngest of three sons, and had one sister. His early education was partly at the hands of his father and partly from the rector of Glaisdale, the Rev. B Richardson; thence he went to Sedbergh, and thence he matriculated at Worcester College, Oxford, taking his M.B. degree in 1860, and proceeding to that of Doctor in 1863. He was Fellow and Tutor of Wadham College, and was about to proceed to Paris when an opening presenting itself at St. Bartholomew's Hospital he applied for and obtained the appointment of Demonstrator of Morbid Anatomy. This post he held until January, 1867. From 1861 to 1865 he was a warden of the college at the hospital. He was elected assistant physician in 1864, and joint lecturer on medicine the same year, which post he held until 1890. In 1869 he was made full physician, an office he continued to hold until 1893, when he was appointed consulting physician. On his resignation as physician he was presented by his friends with his portrait and among other things a tricycle. In 1890 he suffered very severely from influenza, and although he recovered to a certain extent his health was never the same, and in 1895 he began to fail very fast, eventually dying, as stated above, at Tavistock. On April 24th he was buried at Peter Tavy.



J. Andrew.

James Andrew was a man not much known out of the ranks of his immediate friends and acquaintances, for he was of a very shy and retiring disposition; but those who had the honour of his friendship—and it was a great honour—knew what sterling worth there was in the man and what a lovable character his was. He was an admirable specimen of that now almost extinct species, the old-fashioned Oxford man, a good scholar and a man of thoroughly cultured mind. He was always ready to assist those in need with either advice or money, and took many a long journey to bring his skill to bear upon cases without getting anything like a fair remuneration. His lectures were instructive, full of sound sense and really helpful, though not perhaps models of oratory. He wrote but little, his chief works being his thesis on the Relation of Anasarca to Renal Disease in Acute Albuminuria, the Diagnosis of Systolic Murmurs at the Heart's Apex, a paper on Disease of the Mitral Valve, and his Lumleian Lectures on the Etiology of Phthisis. Though old-fashioned, he was an absolutely sound and excellent physician, and his kindness and thoughtfulness for his hospital patients was a thing never to be forgotten by those who saw them. His treatment was in the best sense scientific, and his favourite answer to the question of students, "What is the best book on Medicine?" was "Foster's Physiology"—an answer which showed the cast of his mind, and was well illustrated by his Harveian Oration delivered in 1890. He was a keen observer, an ardent dialectician, very fond of the Socratic method of answering one question by another, and never ashamed to own that he had been wrong. No trouble was too great for him to take over a severe case, and he never spared himself in explaining matters to inquirers. For the following more personal reminiscences we are indebted to one who served under him at the hospital and knew him well.

"James Andrew was one of the most helpful and considerate men who ever breathed and as good a physician as London could produce. To all Oxford men his loss will be irreparable. All who had the privilege of being taught by him at those memorable evening meetings will remember

with affection the little bowed figure who met you at the door of 22, Harley-street, and who dived down the kitchen stairs with a quick movement irresistibly reminiscent of a rabbit, his old briar pipe, and his keen incisive talk upon medicine. No one could put things more clearly or make a subject more interesting, and no one laboured more earnestly to bring down his own intellect to the level of your comparatively dull one. Neither did he forget those whom he had known when they went out into the world, but always had a genial greeting and a kindly query as to their position and prospects. His great amusement was fishing, and he was a thoroughly good sportsman. These details may appear very trivial, but they are very characteristic of the man, and will serve to remind those, if any reminder is needed, who knew him of a very lovable personality."

The accompanying portrait we reproduce by permission of the authorities of St. Bartholomew's Hospital from the one which hangs in the great hall. It is an admirable likeness of the man and his little personal attributes. The old frock coat, with the pin stuck in the lapel and used for testing sensation and the odd-shaped stethoscope, are all part of his personality. And so we close this notice, imperfect at the best, of one who never attained the position he was worthy of, but whose memory will ever live in the minds of those who knew and were privileged to work with him in even the humblest capacity.

Dr. Andrew was married in 1867 to Isabella, daughter of Henry Simpson of Bagdale, who survives him, but he has left no children.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent medical men are announced:—Dr. Andreas Anagnostakis, who is described as the Nestor of Greek Ophthalmologists, at the age of seventy-one years. He was born in Crete, but his parents removed to Greece while he was a child, and he studied medicine in Athens and practised in a provincial town. In 1851 he obtained a scholarship from Queen Amalie, by means of which he was enabled to study in Paris and in Germany for five years. After his return he was appointed Professor of Ophthalmology in the University of Athens and inaugurated there an important school in which the teaching of Helmholtz, von Graefe, Donders, and others has been consistently carried out. Dr. Anagnostakis was for several years Rector of the University, where he was held in great respect.—Professor Gustave Braun, a well-known Moscow ophthalmic surgeon.—Dr. G. Limoncelli, *privat-docent* of Mental Diseases in the University of Naples.—Dr. Margitot, Member of the Paris Academy of Medicine.—Dr. Jaime Pi y Suñer, Professor of General Pathology in the Barcelona School of Medicine.—Dr. H. Engel, formerly Professor of Nervous Diseases in the Philadelphia Medico-Chirurgical College.—Dr. S. G. Moses, formerly Professor of Midwifery and Gynæcology in the Missouri Medical College, St. Louis.

ANNUAL REPORT OF THE SANITARY COMMISSIONER OF THE GOVERNMENT OF INDIA FOR 1895.

[CONCLUDING NOTICE.[1]]

IN our former notice of this report we referred to the changes which had been introduced at the suggestion and instigation of the Army Sanitary Commission, to the interesting data contrasting the past and present mortality of European soldiers in India contained in the volume under review, and to some of the epidemic diseases which had prevailed among the troops in 1895.

We learn that the admission and death-rates from dysentery were greatly, and those from diarrhœa somewhat, increased in that year, owing for the most part to service in the Chitral expedition. The highest percentage of admissions for abscess of the liver was on the Burma coast, but the highest percentage of deaths from hepatic abscess to total deaths was in Southern India. Speaking generally, groups of stations that had a high admission ratio from dysentery, had also a high admission rate from abscess of the liver, but they do not correspond very closely; 27 per cent., or 42 cases out of 154, were returned as associated with dysentery. Of the 51 fatal cases described with sufficient minuteness, we are told that 21 had a single abscess, and 30 multiple abscesses. There were 7 of the 21 single abscesses associated with dysentery or intestinal ulceration, and 14 not so associated; the thirty multiple abscesses, on the other hand, were associated with dysentery or intestinal ulceration in 21 cases, or 70 per cent., and not so associated in 9 cases, or 30 per cent. These points have an obviously important bearing on medical diagnosis and prognosis in regard to surgical procedure. The question of the causal importance of the amœba coli is still under discussion; but, on the whole, the majority of observers are convinced that there is an amœbic abscess of the liver as there is an amœbic dysentery. The brief remarks on this subject at page 45 of the report are worth reading. A table follows showing that the mortality from abscess of the liver in 1895 was more than seventy times greater among European than among native soldiers, while on the other hand, the admission ratio from dysentery among European soldiers was to that of the native soldiers as 1:1·4. This matter was more fully gone into in the report for 1894. It may be incidentally remarked that, while no cases of hepatic abscess following enteric fever were returned in 1895, there were several cases consequent on apparently non-dysenteric ulceration.

The next subject is one which has of late occupied a good deal of public attention; and no wonder, for the figures may be said to be, without exaggeration, appalling. The admission-rate for India for venereal disease was 522·3 in 1895, against 511·4 in the previous year, and the number of men constantly sick in hospital from venereal disease was equal to over three regiments. As youthful and recently arrived men have become more common in the army venereal disease and enteric fever have, not unnaturally we are told, increased in frequency of occurrence. From a tabular statement in the report we gather that there has been a more or less continuous rise in venereal disease and constitutional syphilis since 1885. But we need not stay to consider the subject further on this occasion, the statistical evidence and the proposed measures in regard to it having already given rise, as everyone knows, to much discussion. We may remark, however, that we do not attach so much importance as some do to ablution as a preventive measure. Practically, it is most difficult to ensure its being so promptly carried out as to be of use. Daily experience with solutions of cocaine, &c., in ophthalmic practice shows that absorption is very rapid. Turning to the vital statistics of officers we find that the death-rate for those of the British army was 11·10, and that for the Indian army 9·62, per 1000 respectively. Enteric fever, the Sanitary Commissioner remarks, caused more deaths among the British than among the Indian officers, apparently because the latter have to serve first with British regiments, and it is known that youthful and newly arrived men are more liable to take the disease than others. The invaliding rate, as might be expected, is much higher for officers than for men. The admission and death-rates from enteric fever among officers do not differ much from the corresponding ratio among the men, but the general admission and death-rates are lower among the former.

Passing on to that section of the report dealing with the native army of India we find several points of interest. Enteric fever is a well-known cause of great sickness and mortality among European troops in India, and the following table brings out the striking difference between the British and native armies and the gaol population of India in this respect.

	1882-91.		1895.	
	Admissions.	Deaths.	Admissions.	Deaths.
European troops	14·7	4·13	26·3	6·72
Native troops	0·3	0·09	0·2	0·07
Prisoners	0·2	0·10	0·4	0·13

We have previously called attention to tables that have appeared in former reports to the same effect. About the fact, explain it how we may, there cannot be any doubt, for the figures are substantially repeated from year to year.

[1] The first notice appeared in THE LANCET, April 24th, 1897.

Among native prisoners nearly every fatal case of disease is subjected to post-mortem examination, although these rarely take place in the case of native soldiers. Moreover, the fever mortality in the European army is not the same in amount, which, as the Sanitary Commissioner observes, indicates that the difference is not a mere matter of diagnosis. Taking the percentages in deaths we find that 44·0 and 0·6 represent the mortality from enteric fever among European and native troops respectively. The amount of venereal disease among native troops is relatively small and remains pretty stationary. Native soldiers are usually married; they are abstainers from alcohol, have less pay than European soldiers, and remit much of it to their families; they belong to the country and do not commonly consort with the prostitute class, and would lose caste by doing so; and there has been no change in the native army corresponding to the introduction of the short service system in the British army. With regard to guinea-worm there are some interesting facts respecting the distribution of the parasite recorded in the report. The number of cases during the year amounted to 516, against 499 in 1894. By far the largest number of admissions occurred in South-Eastern Rajputana, Central India, and Gujarat. Of the total number of cases, 9 per cent. declared themselves at Kherwara and 6 per cent. at Sirdarpore. There were only 3 cases altogether in the whole European army. This great contrast is stated to be probably due to the different customs of Europeans and natives as regards bathing and water drinking.

It would be extremely difficult to discuss the sections dealing with the gaol population and the history of the chief diseases among the general population in the limits of space at our disposal; and those of our readers interested in the subject, and in the history of cholera during the year under review, must turn to the report for themselves, in which the results of the various inquiries, and of the bacteriological investigations that were instituted by Mr. Hankin and others are given. Section X. deals with a number of subjects including a summary of the facts connected with the Red Sea pilgrim traffic and the outbreak of cholera at Camaran, the researches conducted in the biological laboratory attached to the office of the Sanitary Commissioner, and other matters.

In an appendix to the Report the new rules are published regarding the measures to be adopted on the outbreak of cholera amongst troops in India, which are the outcome of an inquiry into the subject by a committee specially appointed for the purpose. The revised rules received the sanction of the Government of India on Sept. 10th, 1896.

ADJUSTABLE X RAY FOCUS TUBES.

MR. A. A. C. SWINTON writes:—As all who have had occasion to use x rays for practical purposes are aware, the penetrative value of the x rays produced by any given Crookes's tube depends very largely upon the exact degree to which the tube has been exhausted. Further, as is well known, a tube originally exhausted to any particular vacuum is found in practice to alter its degree of vacuum with age and with use. With tubes of the Jackson focus type that have been well exhausted in the first instance, the vacuum usually increases the more the tube is used, particularly if sufficient power is employed to heat to redness the platinum anti-cathode. Indeed, it is not unusual for this increase of vacuum to be such that it is eventually found impossible to get any discharge to pass through the tube at all. Various arrangements have from time to time been suggested and tried for the purpose of regulating the vacuum in tubes. One plan is to keep the tube permanently attached to the mercury pump, so that a little air can be pumped out or a little let in whenever it is found necessary. Another arrangement is to place some material, as, for instance, caustic potash, which is capable of absorbing air and giving it out again when warmed, in a small pocket or annex to the tube, which can be heated by means of a spirit lamp and the vacuum reduced as occasion requires. This, however, as also the ordinary plan of heating the whole tube by means of a spirit lamp or Bunsen burner, so as to drive off into the interior of the bulb the gases condensed upon the glass, are at best only makeshift expedients, which, though capable of good effect in the hands of skilled experimenters, are not permanent in their results or adjustable with sufficient accuracy to be really satisfactory. Further, exceedingly minute alterations in vacuum will make all the difference between satisfactory and unsatisfactory results in some of the more difficult cases to which x rays are now applied. Under these circumstances I have devoted considerable attention to devising a method whereby the penetrative value of the x rays produced by a focus tube could be easily varied without alteration to the vacuum, and whereby, further, the penetrative value of the rays could be maintained constant at any desired degree, in spite of the uncontrollable variations in the vacuum that are found to occur in practice. The penetrative value of the rays for any given degree of vacuum depends, among other things, upon the area of the cathode disc and upon the lineal distance between the cathode and anti-cathode. Upon these principles I have designed two separate forms of adjustable focus tubes, Figs. 1 and 2 being two views of one of these tubes and Fig. 3 a view of the other.

In the form of tube shown in Figs. 1 and 2 advantage is taken of the difference of effect produced by employing

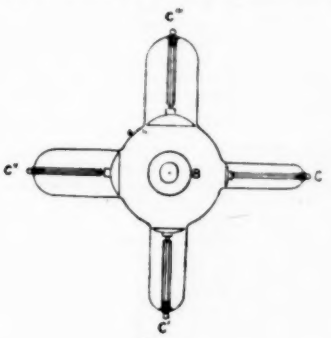
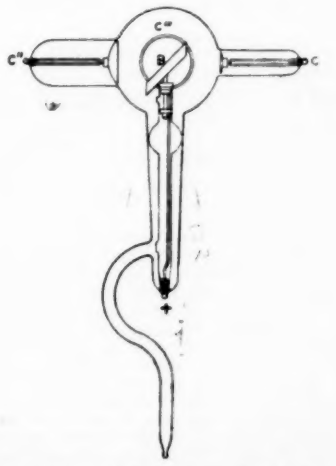


Fig 1.

cathodes of various sizes. As will be seen from the illustration, the tube is provided with four concave aluminium cathodes, C, C′, C″, C‴, all of the same radius of curvature, namely, 0·75 inch, but of four different diameters, varying from 0·5 inch in the case of C, to 1·125 inches in the

Fig 2.



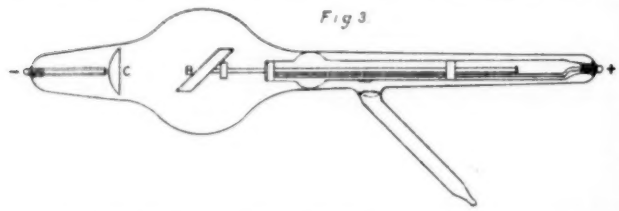
case of C‴. The cathodes are so placed that they all focus on a point in the centre of the bulb of the tube, and the inclined anti-cathode disc B is mounted upon a small steel spindle, turning in aluminium sockets, so that the anti-cathode can be easily rotated by tapping the tube, so as to face any one of the four cathodes that it is desired

to work with. The anti-cathode disc B, made of aluminium, is of considerable mass, being an oblique section about 0·25 inch in thickness, cut from an aluminium rod one inch in diameter. The cathode rays are not received direct upon the aluminium, but upon the surface of a disc of platinum about 0·6 inch in diameter, and about 0·025 in thickness, tightly wedged and riveted into a shallow circular depression turned out of the face of the aluminium block. The reason for the particular shape of the aluminium portion of the anti-cathode is to ensure its being balanced in all positions of the tube, so that it should have no tendency to rotate of itself. The object of the general arrangement is to prevent the platinum from attaining an excessive temperature, even when great electrical power is employed, this resulting from the considerable radiating surface of the aluminium, and its considerable mass requiring a long time to heat it up to any high degree. This arrangement makes the tubes take considerably longer to exhaust in the first instance, but renders them much more permanent, as not only is there no danger of melting the platinum, as frequently occurs in the ordinary form of anti-cathode, but also the difficulty experienced with the red-hot platinum occluding the residual gas, and thus increasing the vacuum, is largely done away with, while, in addition, the platinum having only one surface exposed and never getting very hot, the tubes do not blacken so quickly.

As will be seen from the illustration, the anti-cathode is supported in a long double glass tube, through which passes an aluminium connexion to the anode terminal. By this method great rigidity and accuracy are attainable and the anode and cathode terminals are kept well apart. During the process of exhaustion it is necessary to make each of the cathodes operative in turn so as to expel the residual gas, and finally the tube is exhausted to the necessary vacuum to produce x rays of medium penetrative value when one of the intermediate sized cathodes is in use. The tube is then sealed off, and afterwards the penetrative value of the rays can be varied at will by turning round the anti-cathode so as to face any one of the cathodes and making that cathode alone operative. The small cathode gives rays of the highest penetration and the large cathode rays of the lowest penetration. With cathodes of the dimensions given the range is very considerable. It can be diminished or increased by making the cathodes more nearly of one size or the reverse. In place of the rotating anti-cathode a fixed one may be used of four-sided pyramidical form with a platinum disc let in on each face opposite to each cathode. The anti-cathode terminal need not be used as anode, as when one disc is cathode the immediately opposite disc may be employed as anode.

The other tube, by which the penetrative value of the rays can be altered by quite a different method, is shown in Fig. 3. In this case the tube is fitted with but

Fig 3



a single cathode C, and the anti-cathode B, which is of similar construction to that used in the other tube, is carried upon a steel rod, which slides in two aluminium blocks mounted in a glass tube and connected to the anode terminal. By slightly inclining and shaking the tube the anti-cathode can be made to slide along in the bulb so as to alter the distance between the cathode and the centre of the anti-cathode from about half an inch to three inches. Stops are provided upon the sliding steel rod to prevent its travelling too far in either direction. With a tube of this description it is found that the shorter the distance between the cathode and anti-cathode the higher is the penetrative value of the x rays, and *vice versâ;* so that by simply altering the position of the anti-cathode it is possible both to compensate for variations in vacuum, and also, within limits, to produce x rays of any desired penetrative value. I am indebted to the assistance of Mr. J. C. M. Stanton and Mr. H. L. Tyson Wolff, who made the tubes illustrated, as also all the earlier tubes with which the original experiments were carried out.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary meeting of the Comitia of the College was held on April 29th, Dr. WILKS, President, being in the chair.

The following gentlemen were admitted to the Membership of the College:—William Bain, M.D. Durh., F.R.C.S. Edin.; T. Hillier Chittenden, M.D. Durh.; Alfred Eddowes, M.D. Edin.; and E. S. Pasmore, M.D. Lond. The Licence of the College was granted to 108 gentlemen.

A communication was read from the secretary of the Royal College of Surgeons of England reporting certain proceedings of the Council of the College on April 8th.

The following Members of the College were elected Fellows:—J. A. Coutts, M.B. Camb.; J. Galloway, M.D. Aberd.; W. E. Wynter, M.D. Lond.; W. S. Colman, M.D. Lond.; A. F. Voelcker, M.D. Lond.; James Taylor, M.D. Edin.; G. I. Schorstein, M.B. Oxon.; E. H. Starling, M.D. Lond.; J. S. Risien Russell, M.D. Edin.; A. A. Kanthack, M.D. Lond.; J. R. Bradford, M.D. Lond.

The quarterly reports were received from the Finance Committee and from the Examiners for the College Licence.

A list of books presented to the library during the past quarter was received.

The names of Dr. Theodore Williams and Dr. Hood were added to the Finance Committee.

THE GRECO-TURKISH WAR.

THE latest news from Athens announces the fact that the Greeks are determined to continue the war. With the purely political or military aspects of the campaign we have, of course, but little concern. It is in the sanitary, medical, and ambulance transport arrangements of the belligerent forces that we are mainly interested, and as to these little or no reliable information has reached this country. The readers of the telegraphic reports from the seat of war and from Turkish and Greek sources are perplexed by their different and contradictory statements, but nothing that has occurred during the last few days seems likely to affect the real military situation. The fighting at Velestino may have been altogether, and for the time, in favour of the Greeks, but it does not essentially alter the position or annul the successful and highly important results which the Turkish troops under Edhem Pasha's command have already attained elsewhere. Turkish reinforcements are arriving, and unless there are any political reasons for Edhem Pasha's present inaction, it may be, and probably is the case, that the apparent delay on the part of the Turks is attributable to strategical reasons and to the fact that the Turkish plan of the campaign is not yet ripe, and the arrangements for any supreme or final effort on their part are not completed. Be this as it may, the number of killed and wounded in the engagements that have taken place does not seem to have been great when the strength of the belligerent armies is taken into account. As far as the scanty intelligence that has reached this country goes, the Turkish hospital service seems to be good; at any rate, nothing has been said to the contrary. The fortitude exhibited by the wounded Turks and the rapidity of their recovery have been remarked upon. The hospitals are stated to be well equipped and provided. As far as the Greeks are concerned, our readers have probably noticed that occasional references have been made by some of the war correspondents to the non-employment of chloroform and anæsthetics in their hospitals. Whether this be due to the fact that they have an insufficient supply of these among their hospital stores, or, what is most probably the case, that these agents are not generally used in minor cases of surgery, but reserved for all the major or more severe operations, we cannot say; but the accounts speak of the quiet fortitude and cheerfulness of the patients in the Greek military

hospitals, and references are made to the benevolent services of the nursing staff. We hear but little of the services of the Red Cross Society, although it is certain that its members must have been actively engaged in administering to the aid of the sick and wounded. A number of English and French surgeons from Constantinople are stated to be present with the Turkish force at Larissa. We suspect that, owing to the hilly and difficult nature of the country, there must have been unusual difficulty in getting field hospitals, or sections of field hospitals, well to the front in the fighting that has taken place hitherto.

BUBONIC PLAGUE IN INDIA.

THE Anglo-Indian papers by the last mail are still very full of this subject, but their general purport is favourable. The worst is over and the epidemic is still declining.

The Secretary of State for India has received the following telegram from the Governor of Bombay on the subject of the plague:—

"Deaths from all causes in Bombay city for week ended April 30th, 683; reported plague deaths, 169. The population is returning continuously and is now variously estimated at from 600,000 to 700,000. All persons coming into Bombay are now medically examined. In Poona city deaths from all causes during the week ended April 30th, 78; reported plague deaths, 45. Further inquiry confirms correctness of figures. Satisfactory result of Poona city operations shown by return of plague cases. They were: for week ended March 26th, 319; April 2nd, 238; April 9th, 235; April 16th, 159; April 23rd, 94; April 30th, 60."

At an adjourned meeting of the Bombay Medical and Physical Society, held on March 19th last, the papers read before the society on the subject of the plague on March 5th were discussed. A large diagrammatic chart has been prepared by Dr. Weir showing the progressive development of the epidemic, and the close relation between the total mortality and the mortality from plague, and the state of the barometer and dew-point during the prevalence of the disease.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6987 births and 3854 deaths were registered during the week ending May 1st. The annual rate of mortality in these towns, which had been 17·9 and 18·8 per 1000 in the two preceding weeks, declined again last week to 18·3. In London the rate was 16·8 per 1000, while it averaged 19·3 in the thirty-two provincial towns. The lowest rates in these towns were 9·9 in West Ham, 12·5 in Brighton, 12·8 in Plymouth, and 12·9 in Croydon; the highest rates were 25·2 in Manchester, 27·8 in Blackburn, 28·3 in Bolton, and 28·9 in Salford. The 3854 deaths included 351 which were referred to the principal zymotic diseases, against 334 and 367 in the two preceding weeks; of these, 110 resulted from measles, 104 from whooping-cough, 55 from diphtheria, 32 from scarlet fever, 31 from diarrhœa, and 19 from "fever" (principally enteric). No fatal case of any of these diseases occurred last week in Brighton or in Halifax; in the other towns they caused the lowest death-rates in Sunderland, Swansea, Derby, and Huddersfield, and the highest rates in Manchester, Burnley, Salford, and Bolton. The greatest mortality from measles occurred in Birkenhead, Liverpool, Bolton, Manchester, Salford, and Burnley; and from whooping-cough in Manchester, Burnley, and Blackburn. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 55 deaths from diphtheria included 40 in London, and 2 each in West Ham, Birmingham, Sheffield, and Hull. No fatal case of small-pox was registered in any of the thirty-three large towns. There were 12 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 1st inst., against 16, 11, and 7 at the end of the three preceding weeks; 6 new cases were admitted during the week, against 1 and 0 in the two preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2380, against 2449, 2406, and 2442 on the three preceding Saturdays; 223 new cases were admitted during the week, against 234, 216, and 269 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 273 and 289 in the two preceding weeks, declined again to 273 last week, and were 91 below the corrected average. The causes of 43, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Nottingham, Bradford, Leeds, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Wolverhampton, Norwich, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·3 and 22·6 per 1000 in the two preceding weeks, declined again to 22·0 during the week ending May 1st, but exceeded by 3·7 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·9 in Dundee and 18·8 in Aberdeen to 25·6 in Perth and 30·1 in Edinburgh. The 655 deaths in these towns included 52 which were referred to measles, 45 to whooping-cough, 15 to diarrhœa, 6 to "fever," 6 to diphtheria, and 3 to scarlet fever. In all, 127 deaths resulted from these principal zymotic diseases, against 107 and 102 in the two preceding weeks. These 127 deaths were equal to an annual rate of 4·3 per 1000, which was 2·6 per 1000 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 39 in each of the two preceding weeks, rose to 52 last week, and included 35 in Edinburgh and 12 in Glasgow. The deaths from whooping-cough, which had increased from 38 to 41 in the three preceding weeks, further rose to 45 last week, of which 24 occurred in Glasgow and 17 in Edinburgh. The 6 fatal cases of diphtheria exceeded by 4 the number in the preceding week, and included 3 in Glasgow. The 6 deaths referred to different forms of "fever" were all recorded in Glasgow, and of the 3 fatal cases of scarlet fever 2 occurred in Edinburgh. The deaths from diseases of the respiratory organs in these towns, which had been 154 and 165 in the two preceding weeks, declined again last week to 128, but slightly exceeded the number in the corresponding period of last year. The causes of 53, or more than 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28·2 and 34·6 per 1000 in the two preceding weeks, declined again to 29·5 during the week ending May 1st. During the past four weeks of the current quarter the death-rate in the city has averaged 32·1 per 1000, the rate during the same period being 17·1 in London and 28·0 in Edinburgh. The 198 deaths registered in Dublin during the week under notice showed a decline of 34 from the number in the preceding week, and included 36 which were referred to the principal zymotic diseases, against 36 and 41 in the two preceding weeks; of these, 16 resulted from measles, 13 from whooping-cough, 3 from "fever," 2 from diphtheria, 2 from diarrhœa, and not one either from small-pox or scarlet fever. These 36 deaths were equal to an annual rate of 5·4 per 1000, the zymotic death-rate during the same period being 1·5 in London and 10·5 in Edinburgh. The fatal cases of measles, which had been 15 and 19 in the two preceding weeks, declined again to 16 last week. The deaths referred to whooping-cough, which had been 14 in each of the two preceding weeks, were 13 last week. The mortality from diphtheria and from "fever" slightly exceeded that recorded in the preceding week. The 198 deaths in Dublin last week included 33 of infants under one year of age and 34 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from the numbers recorded in the preceding week. Nine inquest cases and 9 deaths from violence were registered; and 77, or more than a third, of the deaths occurred in public institutions. The

causes of 15, or nearly 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR F. A. HARRIS and Surgeon-Captain C. W. Reilly have joined at Woolwich.

The under-mentioned Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels:—Oswald G. Wood, vice E. J. Fairland, retired; John Martin, vice T. J. P. Holmes, retired. The under-mentioned Surgeon-Captains to be Surgeon-Majors:—William E. Berryman and Sidney E. Duncan. Surgeon-Captain Harry E. B. Porter resigns his commission.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Major R. Ross (Madras) has made over, and Brigade-Surgeon-Lieutenant-Colonel A. F. Dobson (Madras) received charge of, the office of the Residency Surgeon at Bangalore. The services of the under-mentioned officers are placed temporarily at the disposal of the Government of Madras for employment on plague duty:—Surgeon-Lieutenant Illington, Surgeon-Lieutenant Browne, and Surgeon-Major Waddell. The services of the under-mentioned officers are placed temporarily at the disposal of the Government of Bombay for employment on plague duty:—Surgeon-Lieutenant-Colonel Hamilton, Surgeon-Major Routh, A.M.S., Surgeon-Major Deane, A.M.S., Surgeon-Captain Jones, A.M.S., Surgeon-Lieutenant Fleury, A.M.S., Surgeon-Lieutenant King, Surgeon-Captain Jackson, A.M.S., Surgeon-Lieutenant James, and Surgeon-Lieutenant Dee.

NAVAL MEDICAL SERVICE.

Deputy-Inspector-General of Hospitals and Fleets Henry Macdonnell has been promoted to the rank of Inspector-General of Hospitals and Fleets, and Fleet-Surgeon Robert Grant has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets. Fleet-Surgeon Kelly Conway has been placed on the Retired List, with permission to assume the rank of Deputy-Inspector-General of Hospitals and Fleets.

The following appointments are announced:—Staff-Surgeons: Samuel W. Vasey to the *Barfleur*, and James C. F. Whicher to the *Caledonia*. Surgeon: Edward Cooper to the *Victor*, additional.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain S. H. Moore to be Surgeon-Major.

VOLUNTEER CORPS.

Artillery: 1st Essex (Eastern Division, Royal Artillery): Francis Augustus Brooks, M.D., to be Surgeon-Lieutenant. *Rifle:* 3rd Volunteer Battalion the South Wales Borderers: Surgeon-Captain J. W. Davies resigns his commission. 1st Volunteer Battalion the Royal Sussex Regiment: Charles Burnett Scott, M.D., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Royal Sussex Regiment: Surgeon-Lieutenant G. L. L. Hawken resigns his commission; George Black, M.B., to be Surgeon-Lieutenant.

THE HEALTH OF EUROPEAN TROOPS IN INDIA.

Lord George Hamilton's despatch may be fairly regarded as proposing very moderate remedial measures for the consideration of the Government of India. The Anglo-Indian papers appear to consider that these do not go far enough to meet the requirements of the case; whereas, on the other hand, Mr. Walter S. B. M'Laren, the chairman of the British Committee of the Federation for the Abolition of the State Regulation of Vice, urges the Secretary of State for India to withdraw his despatch and substitute for it another of which his committee can approve. We may, therefore, infer that the Secretary of State has been studiously moderate in the expression of his views on this difficult subject. The committee make a great point of the examination of women, to which they are strongly opposed. It is, no doubt, impossible to tell whether a woman is diseased or not without examination, and we fail to see the force of the objection to it in the case of a woman pursuing the occupation in question, where reasonable grounds exist for the belief that she is diseased and the examination is conducted by one of her own sex. As regards what is urged about the discouragement of vice and placing the soldier in an environment tending to develop his best physical, moral, intellectual, and religious faculties, we can only say that high-sounding generalisations of this kind are of too vague and visionary a character to form a basis of practical action. The aim of the authorities in India has practically been in this direction, and there is no reason whatever against efforts being made to remove temptations and discourage vice; but even a small amount of observation and experience of life and of human nature suffice to show how little reliance can be placed on them as safeguards against sexual temptations. The reasons for regarding constitutional syphilis as a contagious and hereditary malady do not admit of controversy, and we cannot see why it should not be placed on the same footing as other contagious diseases which endanger the health of the community, or why those measures which have been found necessary and efficacious in the one case should not be applied in the other. By all means let efforts at moral suasion be carried out; but sensible people will not be disposed to neglect physical methods of a direct and practical nature for limiting the spread of such a dangerous and preventable disease as syphilis.

NON-DIPHTHERITIC SORE-THROAT AMONG SOLDIERS.

The place of honour in Professor Simon Duplay's *Archives Générales de Médecine* for April is accorded to a report on Non-diphtheritic Membranous Sore-throat, by Surgeon-Major P. A. Cassedebat of the 2nd Zouave Regiment. During about twenty months, from January, 1893, to September, 1894, no fewer than 134 cases of this affection occurred among the men of his corps, of which the strength was between 750 and 800. The writer sets forth the details of each case in tabular form, including an epitome of the bacteriological examination, and supplements this information by descriptive letterpress, which is divided into ten sections. A plan of the barracks, showing the general arrangement as well as the position of the infected beds, is also appended. In all the cases the false membrane was firmly adherent to the subjacent tissue, and when removed did not dissolve readily in water. Slight cases of sore-throat, with fugitive, easily displaced membranes, were excluded from the collection, as were also all sore-throats that were dependent on measles, scarlet fever, syphilis, follicular tonsillitis, or ablation of the tonsils. At the onset the only way to establish the diagnosis from diphtheria was by the aid of the microscope, but the true character of the complaint soon declared itself, the vast majority of the patients being fit for duty in four or five days. The bacteriological examination revealed an immense assemblage of microbes of various kinds, but the streptococcus alone was constantly present. It is to this micro-organism that Surgeon-Major Cassedebat attributes the origin of the disorder; and he likewise is of opinion that the varying physical character of the false membranes may be due to a plurality of streptococci. A considerable portion of the paper is devoted to an inquiry into the contagiousness of the affection, but apparently its incidence among soldiers is but little influenced by propinquity of habitation.

DEATHS IN THE SERVICES.

Surgeon-General James Tyrell Carter Ross, C.I.E., F.R.C.S., Bengal Army (retired), aged seventy-four. He served in the Sutlej and Punjaub campaigns and in several Indian expeditions between 1851 and 1854, in the Indian Mutiny campaign, in expeditions from Allahabad and at Khoongunge, and Futtehghur; was principal medical officer in the Duffla expedition of 1874, and took part in the Zulu campaign of 1879.

Deputy-Surgeon-General Charles T. Eves, Indian Medical Service (retired), at Brook's Lodge, Cheltenham, on April 26th last, aged sixty-eight years.

INSPECTION OF MEDICAL EQUIPMENT AT LAHORE FORT.

The Principal Medical Officer of Her Majesty's forces in India, accompanied by several officers, recently made an inspection at Lahore of some new equipment designed for field service, which consisted of the "Tortoise" pattern tent adapted to Indian requirements, a new pattern stretcher for mule transport, and a portable field stove.

WE have received from Messrs. Novello, Ewer, and Co. a "Hymn in Commemoration of Queen Victoria's Nurses" ("How Shall we Teach our Children?"). The words are written by the Dean of Rochester and the music is composed by Dr. G. C. Martin.

Correspondence.

"Audi alteram partem."

PUBLIC HEALTH (SCOTLAND) BILL.

To the Editors of THE LANCET.

SIRS,—A new Scottish Public Health Bill is before Parliament at this time, and will soon pass, more or less modified, into law. Surely it is becoming that a measure so important to the lieges, and withal affecting our own profession very closely, should be seriously considered by medical practitioners all over Scotland as long as its terms are open to amendment, and yet there is little displayed interest in the subject. It is thirty years or more since the last general Act was passed, and it may be that a third of a century will again elapse before the present Act—when we get it—is again considered.

The Bill slurs over the altogether wrong interdependence of the sanitary officials. It ought to distinctly enjoin the due subordination of *all* the staff to the medical officer of health. Every good organisation, it is surely needless to assert, must have a single controlling head or centre. But this new Bill leaves the relative position of head medical officer and head sanitary inspector as it exists—i.e., at once coördinate and undefined. While medical officers of health, for the sake of harmony, and with a due regard to their position as highly trained and thoroughly educated gentlemen, demand their proper place—viz., that of the recognised heads of the sanitary administration in their particular jurisdictions—on the other hand, it can be easily shown that this is the right and due course to be followed not only in the interests of the public but also in those of the profession at large. The family medical attendant has a somewhat difficult part to play when his patients are the subjects of infectious disease as well in connexion with notification as in regard to the house, its drainage and water-supply, isolation, removal to hospital, and it may be the treatment also of his patients. Even his diagnosis is occasionally called in question. Surely in all such delicate questions it is right that he should be in relation with an authoritative medical brother professional, and not be liable to be hauled over the coals by, it may be, an ignorant and presumptuous sanitary inspector. We do not believe much good will result except from close and confidential working between the practitioner and the chief medical officer of health. And this brings us to consider the propriety of modifying the Notification of Diseases Act. Dr. Cameron, the energetic medical officer of health to Banff, Moray, and Nairn, suggested some time ago that a *single* notification of infection should be enough from each house on the occasion of an outbreak, while the medical attendant should be paid for granting a certificate giving a clear bill of health after termination of the illness for school and other purposes. With this change on the one hand, on the other we might hope to have legal notification of *every* infectious disease, including measles, whooping-cough, mumps, and, let us hope, by-and-by, tuberculosis and syphilis. In addition, we ought to be paid for such certificates. What other profession would have allowed itself to work so long for nothing? It is high time that we should bestir ourselves in this and other directions and refuse to be the slaves of an ungrateful public. There are many other questions which both the profession and people at large ought to study before this Bill becomes law, such as clauses against dangerous trades, overcrowding, &c. But it would take a long time to discuss such matters with advantage. Education of the mind excites general attention, but the care of our bodies little or none. We must e'en bear with it so. I am, Sirs, your obedient servant,

Dingwall, May 1st, 1897. WILLIAM BRUCE.

"NOTES ON ONE YEAR'S SURGICAL WORK."

To the Editors of THE LANCET.

SIRS,—I am much obliged to Mr. T. S. Ellis for his criticism in THE LANCET of May 1st of my remarks on the treatment of flat foot. The reason which led me to adopt the method I described was what happened in a case of hallux rigidus accompanied by flat foot in which I treated the joint by excision and found that the flat foot was at the same time relieved. On trying the treatment in uncomplicated flat foot I found it efficacious. And, after all, it is practical results and not theoretical considerations which is the highest criterion of the utility of any procedure.

I am, Sirs, yours faithfully,

Beaumont-street, Oxford, May 5th, 1897. H. P. SYMONDS.

"THE DECLINE OF THE SCOTTISH UNIVERSITIES."

To the Editors of THE LANCET.

SIRS,—In an annotation in THE LANCET of May 1st you deal with what you call the "Decline of the Scottish Universities." As the annotation is presumably of editorial authority, I trust you will allow me to make a few remarks on the subject, which is of great importance to the large number of Scottish graduates who read THE LANCET. The "decline" is in the number of students at present attending our universities, and you give your view of the causes of the diminution in the matriculation rolls; and the position advanced by you is, in general, that relatively to universities elsewhere examining and teaching are in our colleges conducted on a low standard, and that therefore students who otherwise would have come to Scottish universities go elsewhere to share in the "generous rivalry for qualifications and honours worth the contest." You state that "in the Arts Faculty the standard of proficiency on admission to the curriculum has been too low." If you refer in this charge to the state of matters some years ago it is certainly true; it is quite as certainly untrue now. The entrance examination in Arts is at least as severe, and is as stringently enforced, as in any university in the empire. The questions are set and the examination is supervised by a joint board of examiners elected from all parts of Great Britain by the courts of the four universities so as to ensure that the standard will be maintained and undue favour shown to no candidate. Of this anyone will be satisfied who will look at the questions set and at the *personnel* of the board. You speak disparagingly of the instruction given in the classes—that it "has savoured more of the upper form in schools than of a university." It is true that instruction which might be so characterised has been given, and is being given, and will continue for a short time still to be given; but degree students do not attend such classes, which are not recognised for graduation at all. These lower classes exist to meet what has hitherto been a special Scottish requirement.

To the Universities of Oxford and Cambridge which you contrast with ours students go who are almost entirely from the upper and rich middle classes of society and who have previously been educated at expensive secondary schools. To the Scottish universities students are drawn from every social stratum, and secondary schools until recently have been few and have existed only in four or five of the larger towns. The ordinary school, therefore, had to be in touch with the university, and the gap of the missing secondary school was bridged by the old parochial master doing higher work than his English *confrère* and by the university having special classes which went half-way to meet him. But in Scotland secondary education is making rapid progress, how rapid may be judged by the large numbers of Junior and Senior Leaving Certificates that are annually earned at examinations conducted by the Scottish Education Department at Dover House. So rapidly is higher education spreading in Scotland that the Junior University Classes will soon cease to exist, and an Ordinance has already become law by which the universities can at an early date close these classes entirely. But, as I have already said, these are not degree classes at all. The degree classes are altogether apart; and seeing that they have been and are being conducted by such men as Lord Kelvin, Jebb, Ramsay, Murray, the present Master of Balliol, Butcher and Saintsbury, it is not at all likely that the instruction is less comprehensive or elaborate than that given by college tutors at Oxford or Cambridge. The Scottish University classes are now smaller, not because of inferiority in examination or teaching, but because of the great improvement and spread of secondary education in the country. This allows of men who are going into commercial life and who do not desire a degree, but who do want a sound education up to a certain level, finding what they require amply provided in the public schools, thus leaving the universities free to devote themselves entirely to the higher learning. The very circumstances you have urged in explanation of the decline in numbers did to some extent actually exist in former years, when the classes were

crowded, and it is because of the very measures you indicate as improvements having been given effect to that for a time the attendance has declined. But it is a decline in numbers only, not a decadence of power or aim. On the contrary, just as in all organic transition there is a temporary disturbance of function, so the fall in numbers in our universities marks the transition to a new and higher academic life in Scotland.

Dealing more particularly with medical education you censure the lecture system in Scotland as wasting the time of the student. Much can be said on both sides of this question. It depends greatly on the subject, and especially on the teacher, as to whether five lectures in the week or three will be better for the student, and this the Scottish teacher has now by Ordinance in his own hand. A course consists, not of a hundred lectures, but of a hundred meetings of the class. The professor may lecture or demonstrate practically or teach tutorially or engage the student in manipulation work according as he, with the sanction of the Senate, may determine. Your objection of over-lecturing, therefore, can no longer be urged against the Scottish universities. But if the Scottish medical professors have in the past given more lectures than their English brethren, they have not on that account done less in the way of clinical teaching than has been the case south of the Tweed; on the contrary, they have done much more. The Scottish hospital physicians and surgeons attend in the wards every day, and every day they give clinical instruction. The Scottish student and the Scottish teacher of medicine alike work with a constancy that does not prevail in England in matters both theoretical and practical. It may be said that this will paralyse original research on the part of the professor, but we can point to the two greatest achievements of the century—that of anæsthesia by Simpson, a hard-working professor in Edinburgh, and antiseptic surgery by Lister, when he was lecturing five days a week in the University of Glasgow and teaching clinically five days a week in the Royal Infirmary.

The final reason you give for our decline is certainly a singular one, coming as it does after the others. Having shown to your own satisfaction that the Scottish system of teaching is so bad that it is ruining us, you say a further cause of our decline is the reinforcement of the schools in England and Ireland by teachers and examiners from the schools of Scotland. Your countrymen believe that it requires a surgical operation to get a joke into a Scotsman's head. Surely the writer of your annotation must be a brilliant surgeon. It is true that many Scottish graduates go to England and Ireland, and Canada and Australia, and India and Africa; but while we lose their services at home they spread the reputation of their universities over the globe and send us students from every part of it. While we give, we also take. Of ours, you have in London Ferrier, and Lauder Brunton, and Duckworth, and Ramsay the chemist, and at Oxford the Master of Balliol; of yours, we have in Edinburgh Turner and Greenfield, and Butcher and Saintsbury; in Glasgow we have Lord Kelvin; from Ireland Bower and Lodge; and, lately, Jebb from England and Jones from Wales. We give of our best where we can spare, and we take of yours as freely as we bestow. A reciprocity of this kind is no sign of decadence. If your annotation was written in any gloomy anticipation that the source from which many of the best medical teachers in England have been drawn is in any danger of drying up, let me assure you that your fear is groundless. In the future, as in the past, the Scottish universities will do their duty alike to Scotland and to you. I am, Sirs, yours faithfully,

Glasgow, May 4th, 1897. D. C. McVAIL.

To the Editors of THE LANCET.

SIRS,—In an annotation in your issue of May 1st on the "Decline of the Scottish Universities" prominence is given to some remarkable statements which will rather startle Scottish graduates. The standard of the arts entrance examination may be low in Scotland, but it is notoriously so at Oxford and Cambridge; and the reason that Scottish graduates in arts often afterwards take an arts course at Oxford or Cambridge is not that the education there is of higher quality, but that the prizes are greater. It is the value of the exhibitions, scholarships, and Fellowships that is the attraction, for the Scottish degree with honours is quite as good and as much prized as the English.

The writer says the Scottish M.A. "has never carried with it the same guarantee of thoroughness and academic status implied by that of Cambridge or Oxford." It is a matter of common knowledge that the pass standard at both English universities is disgracefully low, and that often a candidate who has one good subject gets through although his others are weak; whereas in Scotland the standard is much more even, and the knowledge therefore more uniform and thorough. If one system savours more of the upper school form, surely it is the English with its system of tutors and residential colleges. The decline in the number of matriculations at the Scottish universities is almost entirely confined to the medical faculty—e.g., at Edinburgh in 1891–2 there were 1951 medical students, whereas in 1895–6 the number had fallen to 1455. No doubt some of the reasons given by the writer of the annotation may have contributed to this result in a minor degree, but it is much more probably due to the institution of the five years' curriculum, which came into force in 1892, and to the present overcrowded condition of the medical profession—two considerations which he neglects altogether.—I am, Sirs, yours truly,

W. CUNNINGHAM MILROY, M.A., M.D. Edin.

Wigan, May 3rd, 1897.

"RIGHT-HANDEDNESS."

To the Editors of THE LANCET.

SIRS,—The following case, which I met with some twenty years ago, may perhaps be of interest in connexion with the hereditary transmission of acquired peculiarities—a question which has recently been discussed in your columns. The report of the case as published in the Transactions of the Northumberland and Durham Medical Society, Session 1877-78, page 68, is as follows:—

Dr. Byrom Bramwell showed a case of Congenital Under-development of the Left Eyeball or "Microphthalmos," and said: "The condition which this patient presents is a rare one. Dr. Argyll Robertson, of Edinburgh, whose experience is, of course, very great, tells me he has met with few cases, and that little is to be found on the subject in English literature. The patient is aged nineteen. The smallness of the left eyeball was first noticed six weeks after birth. The external parts of the eye are well formed; vision is almost *nil*, owing to the alterations in the optic disc and surrounding portion of retina. There is an interesting point in connexion with the case. The mother, about a year before the birth of this child, received a severe blow on the right eyeball. The globe was destroyed. She was laid up for three months. This child was born about a year (her memory is not accurate on this point, it may be a little more or a little less) after the receipt of the injury. The connexion is an interesting one, and it may be that the injury to the mother's *right* eye had something to do with the under-development of the child's *left* eye. The children born before and after this one are naturally formed."

I am, Sirs, yours faithfully,

Edinburgh, May 3rd, 1897. BYROM BRAMWELL.

A PECULIAR AFFECTION OF THE KNEE-JOINT.

To the Editors of THE LANCET.

SIRS,—The two following cases of disease of the knee-joint which I have met with may be of interest to the profession, as they answer to nothing that I can find in the leading English and German text-books on surgery. The principal features of both consist of acute swelling of one knee-joint occurring suddenly and without obvious cause in delicate young men further characterised by absence of inflammatory symptoms, accompanied by little or no pain, and followed by complete recovery.

CASE 1.—The patient was a thin, weak-looking man, aged twenty-five years. One afternoon after a tennis party, at which, though he played one game, nothing unusual occurred, he found his left knee felt stiff and was swollen. On my examining it the next morning it was found to be moderately swollen, fluctuating, but not tender, the skin was not œdematous or red, and did not feel warm. The patient felt no pain beyond a feeling of stiffness if he tried to bend it. He was told to keep the leg in a horizontal position, and fly blisters were applied. After four days, there being no improvement, a plaster bandage was applied and worn for three weeks, then with a knee-cap and the use of a walking-stick he soon recovered.

CASE 2.—A mealy-faced young man, aged eighteen years, after wheeling about a light barrow one morning felt his right knee become rather painful. He walked home and found that it had swollen. When seen the next day the joint was found to be moderately swollen and gave fluctuation;

there was no tenderness, redness, or œdema of the skin, but he felt a little pain when he walked. The knee was painted with strong iodine liniment for a few days; no improvement followed. A plaster bandage worn for a few weeks caused the fluid to disappear, and with a leather splint he was soon able to work again in the fields, and quite recovered the use of his knee.

Neither of these patients was a "bleeder." Amongst several medical men with whom I have discussed these cases I may mention that Dr. Genth of Schwalbach tells me that he has met with cases apparently similar; he states that his occurred in nervous young men, and that he found, like myself, that blisters were useless, though the local treatment by baths was very beneficial. As regards pathology, synovitis of the knee-joint, requiring either severe injury or septic infection, seems to be excluded, also rheumatism from the monarthritic nature of these cases and struma from their general nature. The only feasible explanation seems to me to be that they are due to a tropho-neurotic change in the synovial membrane occurring in a debilitated subject from some obscure cause.—I am, Sirs, yours truly,

WALTER G. EARLE, M.R.C.S.Eng., L.R.C.P.Lond.

Tunbridge Wells.

*** We agree with our correspondent in thinking these two cases of interest, but we are inclined to look upon them as examples of a synovitis resulting from very slight traumatism in an unhealthy subject. In each case there was a great likelihood of a slight injury having occurred, and certainly such cases are by no means rare after tennis. The speedy cure which resulted from the use of splints is in favour of this diagnosis.—ED. L.

"ACUTE PEMPHIGUS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 13th, which I received to-day, I read a Clinical Note by Dr. Jón Jónsson on "Acute Pemphigus." It might be of interest to your readers to know that I have seen two cases of "acute *generalised* pemphigus," one in a young man, aged twenty-two years, in the year 1894, and the other in a boy aged thirteen years, in October last. The young man died on the fifth day. The boy lived, and was at the moment supposed to be out of danger, up to the eighteenth day, when he died very suddenly. The symptoms in both cases were exactly those described by Dr. Jónsson and Dr. Priestley. There were vesicles on the inside of the mouth (buccal mucous membrane), but no eczema. I am, Sirs, yours truly,

F. G CORBIN, M.D. McGill.

Chascomús, Argentine Republic, April 4th, 1897.

FRACTURES OF LONG BONES IN SCURVY-RICKETS.

To the Editors of THE LANCET.

SIRS,—At the meeting of the Medical Society of London held on April 11th I showed an infant suffering from multiple spontaneous (so-called) fractures of long bones, dependent, in my opinion, on scurvy-rickets. In your report of the proceedings[1] you mention that Mr. Morgan thought my diagnosis questionable on the ground that hæmorrhages and fractures in scurvy rickets were usually near the epiphyses and not, as in my case, in the centres of the shafts. As the President did not allow me to reply to Mr. Morgan's criticism at the time, may I venture to do so in your columns?

Central fractures of long bones may occur in addition to separation of epiphyses and hæmorrhages beneath the periosteum in the course of scurvy-rickets. I have Dr. G. A. Sutherland's permission to refer to one of his cases of scurvy, as yet unpublished, in which such conditions were diagnosed during life by him, and verified by myself post mortem. I did not see my own patient until several months had elapsed since the fractures had been produced, and at this time there were certainly no sub-periosteal effusions. Yet, from the history of swelling and bruising of the limbs, I have little doubt that hæmorrhages were present at first. Such hæmorrhages are very quickly absorbed. The point which needs further investigation is whether these central fractures are the cause or the consequence of the extravasations. Effusions beneath the periosteum may lead to fragility of the bones by depriving them of their normal nutrition and support. On the other hand, the general tendency to hæmorrhage in scurvy may cause sub-periosteal extravasation at the time the fractures occur. Opinions on this point were not forthcoming when the case was shown. The time for discussion was limited, it is true; but if in a society like the Medical Society of London discussion of cases is invited at all, I think that answers to criticisms should be allowed. Otherwise the genuineness of cases exhibited must remain for ever doubtful and the value of facts observed may be impaired.

I am, Sirs, yours truly,

May 3rd, 1897. LEONARD G. GUTHRIE.

[1] THE LANCET, April 17th, 1897.

"THE HOSPITAL REFORM ASSOCIATION: REPORT OF THE COMMITTEE APPOINTED TO INQUIRE INTO THE WORKING OF THE SPECIAL HOSPITALS OF LONDON."

To the Editors of THE LANCET.

SIRS,—THE LANCET of April 17th contains a letter signed by the secretary of the Central London Throat and Ear Hospital upon the shortness of our visit to his institution and stating that important matter supplied by him had been omitted in our report. In reporting upon forty-one institutions it was impossible to spend hours over each visit, as he suggests we should have done. In his case we called three times before finding him at home. In regard to the second point, if we had sent to press one-half of what the various secretaries would have liked said about their particular institutions no journal would have published the report on account of its length. Since publishing the report we have been informed by the secretary of the British Mental Hospital that the annual subscription to that hospital in 1895 was £292. We were unable to publish these figures at the time, as this institution has issued no report since 1894.

We are, Sirs, yours faithfully,

W. KNOWSLEY SIBLEY, M.D.Cantab.,

May 4th, 1897. ERNEST SNAPE, M.D. Brux.

"THE QUESTION OF THE SECOND OVARY IN OVARIOTOMY."

To the Editors of THE LANCET.

SIRS,—The question raised by Mr. Clement Lucas as to the necessity for the removal of the second ovary in ovariotomy is a very important one. As one who has not operated extensively, but who, nevertheless, has seen a considerable amount of gynæcological work, I should feel obliged by your allowing me space to record my views, whatever value they may have. I have in the past, acting on the ordinarily accepted views of eminent gynæcologists, removed ovaries that in the light of my own experience since I would not think of removing now. I have in some cases removed both ovaries, while in others I have removed only one, being influenced, as Mr. Clement Lucas evidently is, by the particular circumstances of each case. I firmly believe there can be no fixed, defined, and inalienable rule in these cases. I remember years ago removing a cystic ovary from a young woman, unmarried, leaving the other, which was enlarged and tender. She made an excellent recovery, but when well enough to be discharged and get about she began to complain of symptoms pointing to the ovary which was left behind, and she was repeatedly sent to me to know if she had not another tumour coming and if it was not advisable to have another operation. I saw no reason for it and refused, and this young woman is now perfectly well. There were pain and tenderness, but I did not consider these sufficient to justify another operation. One cannot avoid the feeling that in this case the second ovary might have been removed had I been strongly impressed with the need for it at the time of operation. We might have had this case to swell the number of double removals, and the tender condition and enlargement would have been employed as arguments in justification.

I know of a case of cyst of the broad ligament which I was about to remove five years ago, but which, owing to the very alarming symptoms occasioned by the anæsthetic, I was obliged to desist from doing when just about to enucleate it. The operation was immediately stopped and the abdomen

closed. From that day to this the cyst has not enlarged; indeed, it underwent some degree of diminution. I have seen the patient at intervals of a few months since and she has continued very comfortable and able to attend to her business. During the time I had the patient under observation previously to the operation the cyst had been increasing, and I only decided to operate because of the disturbance and pain it was causing in its neighbourhood, as well as rendering the woman unfit for her duties and giving her great general discomfort. Its presence does not now cause these symptoms in anything like the same degree, and, as I have already said, she attends to her daily duties, which are of an arduous kind. Why the cyst ceased to increase is another question, but it may have been *in some measure* due to the fact that I made her rest absolutely for six months.

I accidentally discovered a cyst of the ovary when attending a woman four years ago for another matter. It had not increased when I last attended her a few months ago, and she at present suffers only a little from it. She does not know of its existence. Why should she so long as it gives such slight trouble and she is quite able for her duties? She has had two children since I discovered the cyst, and if it has remained *in statu quo* for four years (and perhaps for four years previously to that) may it not remain so for four, or even fourteen, more? I may also instance the case of a young married woman in whom a tumour (cystic) of one ovary has existed to my knowledge for years. It has at times caused a good deal of suffering, and on one occasion I almost decided to remove it. Several months of absolute rest, however, with some treatment, helped her greatly, and she has been able to attend to her household affairs with a considerably greater degree of comfort than previously. I have known of the existence of this cyst for six or seven years, and it does not increase.

These, possibly it may be advanced, are not instances quite analogous, except the first, to those mentioned by Mr. Clement Lucas, inasmuch as in his the abdomen was opened, and the advocates for removal would say that it would be better to remove the organ then than for the woman to undergo the trouble, anxiety, and suffering of a second operation, with its consequent risk and expense. The risk, of course, is small now, thanks to the progress made in surgery during the last quarter of a century. But there is risk, and it ought to be avoided, to say nothing of the other concomitants of an operation. But if there is a reasonable hope that the ovary may not get worse or may recover, I think the woman, especially if a young one, ought to have a chance and the ovary should be left, and I think it may be fairly said that the cases cited show that ovaries to some extent diseased may be left sometimes with a very fair prospect that they may not only not cause increased trouble in the future, but that they may remain stationary or even recover. If, then, some diseased conditions of the ovaries remain quiescent for years, improve, and even get well, we ought not too hastily to conclude that operative interference is necessary, but should keep our patients under observation and treatment. I am confident that some operations may be avoided by this plan, and the subjects of the disease be enabled to pursue their daily duties with comfort. If the time comes for operation the case can be dealt with then just as well as earlier, provided one does not allow it to go too far until dangerous complications arise. I am quite alive to the necessity for early operation. I am sure, however, we will lose nothing by waiting and watching, selecting the proper cases for such a course.

I am, Sirs, yours truly,

D. THOMSON, M.D. Glasg.

Lowndes-street, S.W., May 4th, 1897.

TUBERCULOSIS IN DAIRY CATTLE.

To the Editors of THE LANCET.

SIRS,—In the issue of THE LANCET of May 1st your Irish correspondent refers to the resolution passed by the Dublin University Biological Association concerning the prevalence of tuberculosis among dairy cattle. He further states that it is reassuring to find in the report of the Cowkeepers' Association that the result of a veterinary examination by two gentlemen shows only 4 cows out of 1500 examined were affected with tuberculosis. There are some considerations which would lead one to place very small reliance on the results obtained by these gentlemen, to which I wish to draw public attention. From a return furnished to me by the Veterinary Department of the Privy Council Office, Ireland, I take the following statement: "It appears from the departmental records that the post-mortem examination of the lungs of cattle slaughtered by direction of the Veterinary Department between the years 1888–1893 in the North and South Dublin Unions as having been in contact with cattle affected with pleuro-pneumonia, or otherwise exposed to the infection of that disease, showed that the proportion of cases in which the *lungs* were affected with tuberculosis was almost 5 per cent. The majority of cattle slaughtered were dairy cows." It is evident from this statement that if only four out of 1500 cows are now affected with tuberculosis there must be a most marked improvement in the health of cattle in this district. Indeed, such a marked change in so short a time is sufficiently remarkable to call for some explanation. So far from any explanation of this improvement being forthcoming it is a matter of common knowledge that little or nothing is being, or has been, done to improve the state of the dairy yards, the unsanitary condition of which has been so often pointed out. Taking these facts into consideration, and remembering that the extraordinary prevalence of tuberculosis among dairy cattle in general has been amply proved by numerous statistics, we shall, I think, be justified in doubting these results so long as the methods by which they were obtained are open to suspicion. Professor McFadyean, when summing up the results of his experiments for the recent Royal Commission, states: "The conclusion that appears warranted is that ordinary clinical examination is almost valueless for the detection of tuberculosis in its early stages." Over and over again in his published works this great authority on veterinary pathology has stated that ordinary clinical examination even in the hands of the most skilled and experienced veterinary surgeons is incapable of pointing out all the animals affected with tuberculosis. Unless some more accurate means of diagnosis is used than ordinary clinical examination affords veterinary surgeons merely leave themselves open to the charge of incompetence by certifying animals to be free from tuberculosis. It would appear that Koch's tuberculin in the hands of skilled surgeons is the most accurate method of diagnosing tuberculosis of cattle, and where it cannot be used most veterinary surgeons decline to express a decided opinion. We cannot, then, accept any statement as to the number of tuberculous cattle in our dairy yards which is not based on examination with tuberculin or the results of post-mortem examination. Was this test employed by the inspectors who reported to the Cowkeepers' Association? If so, where are the tabulated returns of the cattle examined? The answer is, I think, that these returns do not exist, because the method was not used, and in consequence the report is valueless.

I am, Sirs, yours faithfully,

T. PERCY C. KIRKPATRICK, M.D. Dub.

Dublin, May 4th, 1897.

"THE SWEDISH SYSTEM OF PHYSICAL EDUCATION."

To the Editors of THE LANCET.

SIRS,—If you would kindly allow me space in your next issue I should be glad to efface an impression which I regret to have made. In your review of my booklet on the above subject exception is taken to one observation. Your reviewer writes: "The English medical profession is charged with 'insular prejudice against anything branded as foreign.'"[1] Reference was here intended to the British nation as a whole. As a general and national characteristic it would be difficult to deny that John Bull entertains a certain scorn for the foreigner and for what is foreign, and has an ingrained belief in the superiority of himself and his opinions. This remark, however, was not specially directed against the medical profession; for does she not gracefully acknowledge that many of the brightest jewels in her crown have been set there by other than English hands? In proceeding I have ventured to state that that learned body is characterised by a conservative spirit, but between "conservative spirit" and "insular prejudice" exists a distinction which certainly constitutes a difference.

Believe me, Sirs, yours very truly,

Bristol, May 4th, 1897. THEODORA JOHNSON.

[1] "The Swedish System of Physical Education," p. 21.

A QUESTION OF COURTESY.

To the Editors of THE LANCET.

SIRS,—May I ask for your opinion on the following case? I have for some twenty years held one of the parish appointments of this district, so am well known over it by the gentry and others, and the extent of the boundaries of the district are well defined. In December, 1896, I was attending a woman, a parish patient, in an outlying cottage (a miserable building). She was evidently suffering from some uterine trouble, but being surrounded by three or four very young children she could get no proper attention there. After a good deal of difficulty I persuaded her to come into the Cottage Hospital here, to ascertain what was wrong and treat her accordingly. A lady guardian living near and a parson's sister in January got interested in her case, and, without ever communicating with me, took over Miss Annie M'Call, M.D. Bern, &c., of 131, Clapham-road, S.W., and also a district nurse. The former examined my patient straight away, and the latter persuaded her not to come into the Cottage Hospital, but to go to Euston-road hospital, where, as far as I can ascertain, the right ovary was removed and the uterus, which was retroflexed, was replaced. They sent her out again under a month from the operation to a poor cottage without ever communicating with me even then in the interests of the patient, and she came back on to my hands in a very weakly and hysterical state, and is at present in the Cottage Hospital, where I trust she may get stronger. I wish specially for you to express an opinion whether a woman who happens to have taken a doctor's diploma is exempt—and we poor men not so—from the unwritten law of courtesy in this noble profession.

I am, Sirs, yours truly,

FREDERIC DANIELL MILLER, M.D. Durh., &c.

Horwoods, Basingstoke, April 30th, 1897.

*** Our correspondent has much reason to complain of want of courtesy on the part of the ladies concerned in this case, who, at the least, should have communicated with and consulted him. Surely ladies who are members of our profession, so far from being exempted from its rules, should be particularly scrupulous in their observance.—ED. L.

MEDICAL MEN AND SUBPŒNA.

To the Editors of THE LANCET.

SIRS,—Thinking that my experience may be of use to other medical men and save them having to waste four or five days at the law-courts for nothing I ask if you will be kind enough to give me a little of your valuable space for my letter. Some time ago I received a subpœna commanding me to appear before the Court of Queen's Bench to give evidence concerning an accident case I had attended, and with the subpœna I received half a crown. I protested; but on looking the subject up I came to the conclusion that I was bound to answer to my subpœna, but need not give evidence. The case came on before the Lord Chief Justice. When I was called into the box I refused to be sworn and asked his lordship how I ought to act. He very kindly told me that not only was I perfectly justified in refusing to give evidence, but that I might have ignored the subpœna and the court would have taken no notice of my contempt.

Half-a-crown is not a reasonable *viaticum* to offer a medical man, and a subpœna served upon him with that amount can be ignored.

I am, Sirs, yours faithfully,

WILLIAM F. CLARKE, M.D. Lond.

West Kensington, May 5th, 1897.

UNIVERSITY OF CAMBRIDGE.—The decision of the Senate on the proposal to admit women to titular degrees will be taken on May 21st in the Senate House. The voting on the primary resolution will take place between 1 and 3 P.M. Energetic canvassing for and against the resolution is being pursued by committees of graduates in Cambridge and London. Dr. Nansen has made to the University a gift of £50 for the benefit of the department of geography. The University of Madras, like those of Calcutta, Bombay, and Allahabad, is to be affiliated to Cambridge. At the Congregation on April 29th Mr. R. S. Thomas, M.A., of Jesus College, and Mr. C. S. Storrs, B.A., of Emmanuel College, were admitted to the degree of Doctor of Medicine; and Mr. G. M. MacDonald to the degree of Bachelor of Medicine and Bachelor of Surgery.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

IX.—FRANCE: UNITED ACTION AND LEGISLATIVE ACTION.[1]

THOUGH the grievances are not so widespread and have not reached so acute a stage as in England, the members of the medical profession in France are also greatly exercised by the question of hospital abuse. Indeed, this trouble together with what we have termed "the Battle of the Clubs," are the two principal reasons which have led to the formation of medical syndicates or unions in different parts of France. It may be said that close upon 25 per cent. of the medical men practising in that country are now in union. The Paris branch of the syndicate is the strongest, for it numbers some 600 members. Dr. Albert le Blond, medical officer of the Saint-Lazare prison for women—which is the lock hospital under the French Contagious Diseases Act—and president of the Paris Medical Syndicate, has devoted much time to the study of the question of hospital abuse. By the courteous invitation of Dr. J. Noir, general secretary of the Paris Syndicate, I was able to be present at a meeting of the executive committee of this organisation, and here I met Dr. le Blond, who furnished me with reports and much information on the question at issue. At the same time I communicated to the committee some details as to the position of affairs in England both with regard to hospital abuse and the battle of the clubs. The members of the committee were delighted to hear that successful efforts had been made in various parts of England to form medical unions. They then requested me to transmit to the medical unions in Great Britain expressions of friendship and fraternity on behalf of the Paris Medical Syndicate. Further they explained that they had established intimate intercourse with the Belgium Medical Syndicate and had had the pleasure of receiving and entertaining in Paris the president and secretary of the Belgian Syndicate, Dr. Vandam and Dr. Cuylitz. They hoped that their relations with the British medical societies would become equally intimate, pleasant, and mutually advantageous. It was their conviction that similar grievances afflicted the medical profession in all parts of the world and that the organisation of the profession into unions or syndicates, both nationally and internationally, was the best means of removing these grievances. To this effect I should add that all communications may be addressed to the general secretary of the Paris Medical Syndicate, Dr. J. Noir, 45, Rue Monge, Paris.

The organisation of the relief of the poor in France differs fundamentally from that which obtains in England. Every phase of public relief comes under the one denomination of L'Assistance Publique—namely, out-door relief to the able-bodied, help or asylums for the aged and infirm or for children, and, finally, hospitals, medical attendance, and medicine for the sick. This is based on the principle that the French nation may be considered as one large family. Each private family is bound by the articles 203, 205, 212, and 349 of the Civil Code to assist its poorer members. But, if the family fails to accomplish this duty, then the Commune, the Department, and the State are each in a measure responsible. The National Assembly has proclaimed that society at large must help its poorer members. The laws of the 19th March, 1793, of the 24th Vendémiaire, year II., and the 22nd Floréal, year II., passed by the National Convention, establish that, in principle, the indigent have a right to public help. Subsequent legislation, however, had tended to weaken rather than to strengthen this principle. Dr. le Blond, in dealing with this question, says that without doubt bread should never be refused to the deserving poor, or a bed in the hospital when sick; but Dr. le Blond cannot admit that misers and those who only pretend to be poor should likewise receive public help. Assistance without discrimination engenders thriftlessness, and Dr. le Blond

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *concluded*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *concluded*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; (6 *concluded*) Feb. 13th, 1897, Leeds; (7) April 17th, 1897, Coventry; and (8) May 1st, 1897, The Royal London Ophthalmic Hospital.

declares that the workmen of the large towns already consider the hospital as the ordinary place of refuge when their labour power is checked by even trivial indisposition. There is, perhaps, some exaggeration in this. A strong prejudice against hospitals still survives, especially in the smaller provincial towns. This acts as a natural check and prevents those who can afford to be treated at home from frequenting the hospital. Again, whatever may be the fault of the administration of the relief of the poor in France we in England have always been taught to admire, and if possible to imitate, the thrifty habits of the poorer classes in France. All the writers and social reformers who have dealt with the subject have held up the French people, and especially the French housewife, as examples of order, economy, and forethought. It would indeed be a calamity if the actual methods of poor relief were to undermine such notable virtues. If Dr. le Blond could study the home life of the poorer classes in England he would soon hold a better opinion of the men and women of his own country.

However this may be, there is no doubt that Dr. le Blond, in an address which was delivered to the Paris Medical Syndicate last November, and which, for propaganda purposes, has been printed and circulated, raised a strong point by insisting that what was meant for the poor should be reserved exclusively for the benefit of the poor. The law of the 24th Vendémiaire, year II, article 18, says: "All sick persons with or without legal domicile who are without resources shall be helped either at their domiciles or at the nearest asylum or hospital." To carry out this law the country has been mapped out into medical districts, and lists have been made of persons without means and therefore entitled to medical aid. To admit into hospitals, and in preference to such poor persons, those who, on the contrary, offer payment, has now, however, become a prevalent practice, and this is described as being in antagonism to the spirit of the law. If the object of hospitals is to aid the indigent they should be utilised solely for that purpose. A verdict of the Supreme Court of Appeal (Cour de Cassation), dated Nov. 7th, 1834, declares the gratuitous distribution of medicaments by non-qualified persons to be illegal. This struck at numerous private charities where, notably, unqualified Sisters of Charity dispensed medicaments. On the other hand, the Government introduced a law on June 30th, 1890, authorising the gratuitous distribution to indigent persons of medicine which had been prepared by the dispensing chemists attached to the offices of the administration for the relief of the poor (Bureaux de Bienfaisance). The argument brought forward by Dr. le Blond is that the giving of medical advice should be limited like the giving of medicaments. If the indigent alone are to receive medicaments gratuitously the indigent alone should receive medical advice gratuitously. Why, then, are people allowed to pay for occupying a bed in a hospital? The admission of paying patients must mean the exclusion of pauper patients. In any case this occurs notoriously with regard to pauper patients suffering from phthisis. It is very rare indeed that such patients are accepted in a Paris hospital. The reason for refusing them is that they are too numerous and their cases generally hopeless. Thus there are more than 100,000 patients wandering about in the streets of Paris and spreading the germs of tuberculosis on all sides. If, instead of accepting paying patients, these persons were taken in by special hospitals a source of infection would be removed from the streets and the prevalence of tuberculosis might be very greatly reduced.

The hospitals, however, profiting by decrees which authorised this practice, established a few paying beds. These were at first reserved for persons in needy circumstances who could not afford an expensive home treatment. But the complaint is that this practice has become far too general. The theory in France has now become just the reverse to what it is in England. Theoretically every patient who enters a hospital is supposed to pay, and if he does not do so he must say why. If he does not pay an inquiry is instituted, and if it is found that he is in a good position the bill is presented, and the patient is made to pay just in the same manner as if he had taken a room in a hotel. On inquiry at the Ministry of the Interior concerning this matter it was explained that the patients never refuse to pay, as they shrink from the disgrace a prosecution would entail. All this, however, applies to the middle classes; no workman, no wage earner, is ever expected to pay; but the commercial man, the clerk, &c., if earning a fairly good salary—£200 a year or so—would be made to pay. Most persons in such a position avoid the unpleasantness of an inquiry by at once offering payment, and here the abuse arises. In most hospitals the charge is for medical cases 3 fr. 60 c. per day, and for surgical cases 5 fr. (or 4s.). The custom is to pay for a fortnight in advance, the balance being restored if the patient leaves before fifteen days. Now anyone entering a hospital and producing the payment for fifteen days is admitted without further question. Thus, not only persons of limited means, but those who are in the enjoyment of large incomes, are able to gain admission to the hospitals without let or hindrance. Therefore patients who could well afford to be treated at home take up the beds at the hospitals which should be reserved exclusively for poorer people. Nevertheless, this abuse has not been considered sufficiently widespread to justify interference on the part of the municipal council. The question is whether this opinion is based on the real facts of the case or whether it arises from the natural desire of the municipal councillors not to do anything that might vex their electors. But as the majority of electors are poor, and as the abolition of such abuses would be to the advantage of the poor, there does not seem to be much ground to warrant this suspicion. It is nevertheless admitted that abuse exists. The municipal councillors themselves recognise the fact, but they believe that the abuse is not sufficiently widespread to justify interference. Undoubtedly the reputation of the surgeons and physicians attached to the great Paris hospitals is so high that this in itself attracts many persons who, though well off, could not afford the very high fees these same medical men charge their private patients.

With regard to the provincial hospitals it is generally admitted that very little abuse exists. There are but few paying patients in the provincial hospitals. People are too well acquainted with each other, and many persons would not like their friends and neighbours to know that they had been to the hospital. With a view to bringing the same considerations to bear upon the population of Paris, it has now been decided that patients must go to the hospital of their own district, and each district may be considered as a small town in itself. Thus there is more likelihood of neighbours and friends knowing when anyone of their circle goes to the hospital, and this helps to check abuse. In the provinces, there also still survives a strong prejudice against the hospitals. The horrors of a bygone and barbarous age are not forgotten. Tradition is hard to kill, and many country folks fail to realise the improvements that modern hygiene and science have effected. They therefore still look with repugnance upon the hospital and make every sacrifice to avoid going there. It is not like the poor in England, especially the children of the poor who look forward to going to the hospital as a positive treat, a holiday from the squalor, the dirt, the misery, and underfeeding of their own families. How many children have shed bitter tears when brought away from the hospital to return to their wretched homes. In the French rural town the faith in the hospital and the love of the hospital have not yet been engendered, and while the poor continue to shrink in terror from these establishments persons who possess means are still ashamed to go there. The latter, if suffering from some serious complaint, prefer to take a train for Paris, where they hope to find better hospitals, better advice, and where there is less chance of being discovered by their friends and neighbours. In this manner, also, some abuse arises.

It may be said that in official circles the prevalence of hospital abuse in France is not considered as constituting a serious grievance. The old arguments are used as to the difficulty of drawing a line, and it is pointed out that in many cases where, to judge by outward circumstances, a real abuse has arisen a deeper investigation will show that after all the patient was not in a position to remain in his own home. In a word, it is urged that there are other classes beside the labourers and artisans who need the aid that hospitals give, and that a clerk with a frock coat may be just as poor as a workman in a blouse. On the other hand, Dr. le Blond, supported by the majority of the members of the Paris Medical Syndicate, maintains that, on the contrary, the grievance is urgent, is spreading, that a richer class of patients is daily invading the hospitals, to the detriment of the really poor and indigent. The fact that the Poor Relief Administration has, according to official documents, given help for half the accouchements that have taken place in Paris suggests abuse. It is difficult to believe that half the women in Paris are obliged to apply for State aid when about to become mothers.

There is another very ugly feature due to the admittance of paying patients to the hospitals. As they can afford to pay they can afford to give tips to the attendants and the nurses. The poor patients, on the contrary, cannot give gratuities, and consequently they are more apt to be neglected and are not so well served. Therefore the poor patient, perceiving this partiality, takes a dislike to the hospital, will not return, and sometimes aggravates his complaint or even sacrifices his life by remaining outside too long. Dr. de Beurmann, of the Paris hospitals, agrees with Dr. le Blond as to the presence of well-to-do persons in the hospitals, and Dr. Fissiaux urges that often a poor person fails to obtain admittance because the beds are taken up by paying patients. Dr. Chevallereau of the Quinze-Vingts Hospital and Dr. Bimsenstein recognise the existence of these abuses. M. Navarre, municipal councillor, in a report presented to the Paris municipality in 1892, stated that the number of well-to-do patients frequenting the hospitals is increasing, and this opinion was confirmed by another municipal councillor, M. Lyon-Alemand.

At the National Congress on Poor Relief, held at Lyons in July, 1894, Dr. le Blond submitted, on behalf of the Paris Medical Syndicate, the following cases of hospital abuse:—1. Dr. Barré calls attention in the *Médecine Contemporaine* to a lady possessing an income of £300 who went to the Hospital of Saint-Louis to obtain douches that she had been advised to take.[2] 2. One of my patients, whose husband was at the head of a flourishing business, was operated upon for an ovarian cyst at the Lariboisière Hospital in 1892. 3. A woman possessing a large shop took her child very regularly once or twice a week during four months to the Trousseau Hospital for disease of the foot. 4. Dr. ——, of the faubourg St. Antoine, mentions a woman who, though well able to pay, went recently to be operated upon at the Charité Hospital. 5. A gentleman, visited by Dr. J——, notoriously well off, was operated on at the Necker Hospital in Dr. Guyon's clinic. 6. The child of a hairdresser and coiffeur who pays a very heavy rent was operated on for an abscess this year at a hospital. 7. A woman presented herself on Nov. 6th, 1893, at the St. Louis Hospital. She was covered with diamonds and asked for and obtained a consultation from Dr. G——. 8. A person who lives in an apartment in one of the best quarters of Paris, and pays from £200 to £240 rent, was gratuitously vaccinated at the Hôtel Dieu this year. 9. The proprietor of a large shop was operated on for fistula in 1893 at the Charité Hospital. 10. A wine merchant and vineyard proprietor remained three and a half months as a patient at the Bichat Hospital and did not pay anything. 11. A landowner and cultivator was operated on at the St. Louis Hospital in 1899 by Dr. P——, and even took away with him antiseptic solutions and dressings. 12. A patient of Dr. L—— gave up this practitioner so as to go to the hospital to have the actual cautery applied to the spinal region. While undergoing this treatment he bought himself a house for £1800, in which he lives. 13. A man, proprietor of a house in which he lives and where he lets half a dozen flats, was at the Hôpital Cochin for several weeks in 1892-93. 14. A restaurant keeper, owner of a large house, got his mother admitted to the Pitié Hospital on March 23rd, 1893, for a fractured leg. 15. The proprietor of a large brewery, for which he was offered £12,000 last year, caused his wife to be treated at the hospital when she suffered from a burn during the months of February and March, 1893, and sent one of his children to the Hospital of l'Enfant Jésus. 16. A woman, whose husband employs thirty workmen, was nursed at the Pitié Hospital for a wound received on March 1st, 1894. 17. A wine dealer was treated for a long while in May, 1894, for an injured shoulder at the Lariboisière Hospital. 18. Another wine dealer was operated on at the Lariboisière Hospital in February of this year and was an out-patient at the hospital for fifteen days. 19. A woman who paid 4*s.* fees to her usual medical attendant went and obtained advice and medicine at the Lariboisière Hospital in 1893. 20, 21, and 22. A butter merchant, a commercial man, and a pork butcher sent their wives to the lying in ward of the Lariboisière Hospital on May 13th, June 13th and 16th, where they were delivered.

The third section of the Congress, enlightened by these facts and the assurance that many other similar cases could be mentioned, unanimously passed the following resolution:—"Firstly, the establishments of public assistance having been created so as to help the indigent and the poor—in a word, the disinherited of fortune—must rigorously close their doors against those who merely pretend to be poor. Secondly, that it is necessary to establish a serious control over all persons who ask for help from these establishments, the actual control being quite futile, since it allows those who pay very small sums to enter, though they possess ample means. Thirdly, consequently we demand that the public powers, the Senate and the Chamber of Deputies, should take into consideration a project of law containing the following stipulations:—Clause A. The hospital is reserved exclusively for the indigent, and those who are deprived of all resources. Clause B. Whosoever, being in a position to pay for his treatment when ill, shall have recourse to these establishments, commits an illegal act. Clause C. Whosoever, except in cases of urgency, shall have committed this illegal act shall be condemned to refund all the cost he may have occasioned and to pay a fine of from 4*s.* to 12*s.* If this offence is repeated a further penalty of one to five days' imprisonment may be inflicted."

Such is the position, briefly stated, of affairs in France. It will be seen that the grievance is not so acute, not so widespread, as in England. Nevertheless, the members of the medical profession in France are taking far more decided action. They have been more successful in the forming of a union. In England such bodies as exist are purely local. No attempt has yet been made to bring about a national federation such as those which exist in France and Belgium. Nor has there been any authoritative pronouncement as to what legislation could effect towards bringing about the desired remedies. There is evidently much to be learned on the other side of the Channel; and now that the road is indicated it is to be hoped that more intimate relations will be established between the medical men of France and Great Britain.

[2] Bulletin Officiel du Syndicat des Médecins de la Seine, vol. ii., p. 184.

THE CONGRESS OF THE GERMAN SURGICAL ASSOCIATION.

(FROM OUR BERLIN CORRESPONDENT.)

THIS Congress was held as usual in Berlin in the week following Easter, and was opened on April 21st, Professor von Bruhns, of Tübingen, being in the chair. The German Surgical Association has now more than 700 members, of whom about 400, including the majority of the leading German, Austrian, and Swiss surgeons, were present. The chairman, in his inaugural address, when enumerating the members of the association who had died during the last twelvemonth, made special reference to the late Sir Spencer Wells, one of its few honorary members. He gave a detailed obituary of the deceased, whom he described as one of the greatest benefactors of humanity, and mentioned that he attended the jubilee meeting of the association.

The Surgical Treatment of Gastric Ulcer.

Professor von Leube, of Würzburg, who had been invited to state his views as a physician, read the first paper brought before the meeting, the subject being the Surgical Treatment of Gastric Ulcer. He said that surgical interference was hardly ever necessary in this disease, and that he had successfully treated about 1000 cases without recourse to surgery. What the patients ought to do is to stay in bed, to use hot poultices, and to drink Carlsbad Water. The poultices must be very hot—hot enough to cause blistering—and they must be changed every ten minutes. The pain usually disappears in about five days, and Priessnitz bandages should then be substituted for the hot poultices and continued for three weeks. Females must not wear corsets. Strict regulation of the diet is indispensable, and Professor Leube gave a detailed account of the dietary system followed in his clinic. The results obtained by this method were very satisfactory. Of all his cases only 2·4 per cent. died; 1·6 per cent. were not benefited, 21 per cent. showed marked improvement, and 75 per cent. were completely cured. Surgical treatment should be resorted to under the following circumstances:—1. When there are repeated hæmorrhages, which make the patient anæmic. It depends on the nature of the individual case whether an operation should be performed or not where there has been only a simple profuse hæmorrhage, for it may be so

abundant that surgical aid comes too late. On the other hand, patients often recover from the acute anæmia caused by a single hæmorrhage. 2. When long-continued medical treatment has proved ineffectual to relieve the pains gastro-enterostomy may be tried. 3. When there is perigastritis caused by adhesion of the stomach to other organs, especially when a subphrenic abscess has formed. 4. When there is perforation of the ulcer and an opening into the abdominal cavity. The chances of a perforated ulcer healing are of course very small. Professor von Leube has observed only two cases of recovery under such circumstances. The operation must be performed within ten hours after the perforation. As to prophylactic laparotomy, he considered that there were no prodromal symptoms of impending perforation sufficiently characteristic to be of practical utility. In conclusion, Professor von Leube said that although in the great majority of cases medical treatment unaided by surgery was sufficient, there were nevertheless many patients who would only be saved by the coöperation of the physician and the surgeon.—In the ensuing discussion Professor Miculicz, of Breslau, said that the statistical results of other practitioners were not as good as those of Professor von Leube, and relapses were found to be rather frequent. On the other hand, surgical treatment is now so successful that of the patients operated on only 10 per cent. died. He had cured cases by operation although the symptoms had developed seven and nine years previously. Three methods of operating for gastric ulcer must be considered: (1) Resection, which is the most dangerous method and not very satisfactory, but must be performed when the case is considered to be carcinoma; (2) pyloroplasty, which is a more simple method, but can only be carried out when the gastric and duodenal walls are soft; and (3) gastro-enterostomy, which also gives good results, but sometimes the contents of the stomach penetrate into the ascending limb of the jejunum, and Professor Miculicz therefore recommended that a second anastomosis should be made between the two loops. Speaking of the indications, he said that in cases of adhesion of the stomach to adjacent viscera an operation is necessary to relieve the pain and the adhesions must be separated. In cases of perforation immediate laparotomy is essential. When the patient cannot take an anæsthetic local anæsthesia must be used. With regard to the other indications, Professor Miculicz agreed with Professor von Leube. Operation is, therefore, indicated—(1) when the patient's life is endangered by hæmorrhage, perforation, and inanition; and (2) when prolonged medical treatment has proved useless.

The Successful Treatment of a Wound of the Heart.

Dr. Rehn, of Frankfort, opened a discussion on Wounds of the Heart and their Treatment. After pointing out that penetrating wounds of the heart are rare, and that large lesions cause immediate death while small ones may heal, he went on to state that auricular wounds are more dangerous than ventricular owing to the thinness of the auricular wall. Hæmorrhage, however, is apt to be more profuse when the right ventricle is damaged, and the prognosis in any case depends practically upon the quantity of hæmorrhage. The diagnosis of the site of lesion is difficult to make, but in doubtful cases cautious probing must be performed. The main indication of treatment, Dr. Rehn said, was to keep the patient as quiet as possible, but severe dyspnœa generally precludes this. Venesection has been recommended to check the hæmorrhage. To remove the blood from the pericardial cavity it has been recommended to puncture the pericardium; but as there is risk of inflicting a new lesion it is better to make a long incision and discover the seat of the lesion. Italian surgeons were the first to suggest sutures in these cases, and Professor Rehn has lately been so fortunate as to meet with a case of wound of the heart where by suturing he was able to save his patient. A young man was brought to hospital, having received an injury from a knife in the left side of the chest. There was much dyspnœa and hæmorrhage. As the pericardium became dilated the patient's state became worse and worse. The wound in the fourth intercostal space was then opened up, and after resection of the fifth rib the pericardium was incised. A wound one and a half centimetres in length was then found in the right ventricle. This Dr. Rehn closed by three sutures and packed the pericardial cavity with iodoform gauze. After the operation the pulse and respiration immediately improved, and although the patient's convalescence was retarded by suppurative pleuritis he made in the end a complete recovery.

The Value of X Rays in Surgery.

Dr. Kümmel, chief surgeon to the Hamburg General Hospital, read a paper on the Value of X Rays in Surgery. He said that by the technical improvements in the Roentgen apparatus the x rays have become indispensable to the surgeon. He had made more than 1500 skiagrams, about 500 of which he showed to the meeting. Among these, the most remarkable were those showing Murphy's buttons in the intestines and vesical and renal calculi. Biliary calculi could not be taken by the rays. In almost every skiagram of fracture exhibited the position of the bones was taken before and after setting, proving that in doubtful cases the diagnosis could be verified in this way, while in cases apparently perfectly reduced displacement often was obvious. In fact, however good the position appeared there was almost invariably some displacement. In all diseases of the bones, syphilitic or tuberculous, in osteo-myelitic affections, and in osseous tumours, the x rays had proved useful. In arterio-sclerosis the sclerosed arteries became visible as black stripes on the skiagram. With regard to the therapeutic influence of the rays Dr. Kümmel stated that lupus was improved by an exposure to them of about one hour twice a day. Dr. Hoffa (Würzburg), Dr. Joachimsthal (Berlin), Dr. Oberst (Halle), and Dr. Stachow, of the Army Medical Staff, confirmed Dr. Kümmel's views, and also showed large collections of skiagrams, which will be placed in the library of the Surgical Association.

The Operative Treatment of Prostatic Enlargement.

Professor Helferich (Greifswald) stated that Dr. White, of Philadelphia, was the first to perform castration for this condition, but that the views of surgeons greatly differed as to the usefulness of the proceeding. No decrease of the prostatic gland in respect of the cases after this operation had been noted by one observer, while another reported improvement in about 80 per cent. As an alternative to castration the resection of the vas deferens had been suggested by Dr. Kohler, whose results showed thirty-six cases cured, fifteen improved, and three deaths after this procedure, while thirteen cases showed no alteration. Dr. Bottini's method of cauterisation of the gland and Dr. Bier's plan of ligaturing the common iliac artery gave comparable results. It must, however, not be forgotten, said Professor Helferich, that the condition is liable to spontaneous improvement, while regular catheterisation will relieve the pain. But in grave cases operative treatment cannot be dispensed with.

Dr. Freudenberg (Berlin) then described Bottini's treatment of prostatic enlargement by the galvano-cautery. He said that narcosis was not necessary, an injection of cocaine being sufficient. Nor need the patient be confined to bed; he might get up immediately after the operation, as neither fever nor hæmorrhage occurred. Bottini had successfully treated 43 cases out of 57, and no relapses had occurred. Dr. Freudenberg himself has operated on 5 men, of ages ranging from sixty-three to eighty-one years. Two of them were able to urinate spontaneously three and four hours afterwards respectively.

Professor Socin (Basle) said that in cases complicated by grave cystitis an operation might be tried, but the prostatic gland should then be removed. The value of the "sexual" operations was very doubtful.

(To be continued.)

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Northern Hospital.

THE relief to the electoral committee of the Northern Hospital at the termination of the contest for the honorary physiciancy to the hospital, vacant by the resignation of Dr. James Barr, must have been great indeed, as that body had become fairly bewildered as to the merits of the candidates owing to the persistent attentions and persuasive eloquence of the friends of the latter. There were several candidates for the post, all of whom were highly qualified. The contest, however, lay between Dr. Thomas Bushby and Dr. Charles Macalister, the former being elected by a majority of 9 votes out of an electorate present of 81 members.

Liverpool Medical Club.

The first annual report of the directors presented to the

second ordinary general meeting of the club must be considered satisfactory. An analysis of the profit and loss account and balance-sheet is very encouraging when the difficulties inevitable in organising a new concern are considered; upon the whole, therefore, the directors of the club hope that with continued good management and an increased membership a prosperous future is assured for the club. During the year a debating society has been formed and seven very interesting and instructive meetings have been held. The entertainment committee arranged a number of smoking concerts, billiard handicaps, &c., during the season, which have been a great success and the means of bringing the members together socially. The membership of the club now amounts to 112. Dr. Richard Caton, physician to the Royal Infirmary, has been elected President for the ensuing year, succeeding the genial and popular Mr. Mitchell Banks.

Bequests to Local Charities.

The late Mrs. Mary Elizabeth Fishwick, of Liverpool, has bequeathed the following amounts to local charities:—£500 to the Liverpool Hospital for Consumption, £100 to the Liverpool Royal Infirmary, and £100 each to the Eye and Ear Infirmary, Myrtle-street, and to the Liverpool Infirmary for Children. She also made bequests to non-medical charities.

Health of Liverpool.

The medical officer reported that 375 births were registered in the city during the week ending April 24th, representing a birth-rate equal to 30·2 annually per 1000 of the population. The deaths registered during the same period amounted to 304, making a rate of mortality equal to 24·5 annually per 1000 of the population. Of the deaths, 67 occurred in public institutions devoted to the treatment of the sick. The residences of 9 who died in these institutions were outside the city. Of the total deaths, 124 were of children below five years of age; of these, 82 were infants under one year. Among the causes of death, diseases of the lungs accounted for 70 deaths, tuberculous diseases (including phthisis) for 43, diseases of uncertain seat for 7, of the brain, &c., for 38, of the heart, &c., for 23, and of the stomach, liver, &c., for 19. Under the various other classes of disease there were registered 44 deaths. A report of the medical officer of health as to the result of the recently established inspection of Canadian and other horses was submitted to the health committee. The members of the committee said the inspection had been very satisfactory, and the condition of horses now imported had very much improved.

St. Helens Health Committee.

The health committee of the St. Helens corporation have resolved to extend the sanitary depôt at Boundary-road by the erection of a six-cell destructor, &c., at a cost of £8000, and to take in a large plot of land which adjoins the depôt.

Liverpool Anti-vivisectionists.

The Liverpool anti-vivisectionists recently held a meeting in the hall of the Young Men's Christian Association in Mount-pleasant. The following is a specimen of the intemperate language indulged in by one of speakers, a well-known Liverpool public man: "The other day, sir, I was in a very famous university city, or in the suburbs of it, and there drew up a carriage in which was seated a gentleman. I was immensely struck by his countenance and his expression. I said to myself, Who can that man be? He is a remarkable man, a clever man, but if I ever saw a face that seemed to have come out of hell, that is the face; and I was told immediately afterwards that this was a gentleman of renowned fame for his great skill in the practice of vivisection." The gentleman alluded to in the above statement is the reverse of this description and benevolent-looking to a degree; but such are the weapons employed by these unreasonable people.

The Diamond Jubilee Nurses.

The subscriptions towards the amount required for extending the district nursing staff in commemoration of the Queen's Diamond Jubilee, alluded to in THE LANCET of April 24th, now exceeds £10,000.

May 4th.

HOSPITAL REFORM ASSOCIATION.—A meeting of the medical profession and others interested in hospitals will be held in Manchester on May 24th, at 4 P.M.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Health of Newcastle.

THE twenty-fourth annual report of Dr. H. E. Armstrong, the medical officer of health of Newcastle-upon-Tyne, states that the death-rate of the city from all causes for the year 1896 was 18·4 per 1000 population. The number of marriages was 132 more than in the previous year. There were 43 fewer deaths from zymotic diseases. The sanitary authority of the city last autumn added measles and whooping-cough to the list of notifiable diseases, and resolved to admit domestic servants to the hospital for infectious diseases free of charge.

The Newcastle Hospital for Sick Children.

The mayor and corporation, accompanied by the President and members of the College of Medicine, and the Principal, professors, and lecturers of the College of Science, wearing their robes, attended Divine service in Blackett-street Presbyterian Church, Newcastle, on Sunday last, when a sermon was preached in aid of the funds of the Hospital for Sick Children. This is the first time that the Colleges have attended officially any church service except that at the Cathedral.

"The Queen's Shilling."

Under the above heading the *Newcastle Daily Chronicle* invites its readers to subscribe 1*s.* each towards the building fund of the Royal Infirmary, £13,000 of the £100,000 proposed to be raised being still wanting. The *Chronicle* undertakes to collect the shillings and to acknowledge each donation in its columns. The best thanks of the community are due for this kindly action of the proprietor of the paper.

Cyclists and the Diamond Jubilee.

The National Cycle and Motor Car Insurance Company, 33, King William-street, London, E.C., offer to contribute the odd shilling of their guinea premiums to the Newcastle Diamond Jubilee Fund for the rebuilding of the Royal Infirmary. This gift is to be a permanent donation, not confined to the present year; and the shilling is to come from all the policies, not only in this district, but all over the United Kingdom.

Newcastle, May 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow University.

MISS M. MACLEAN, M.B., C.M. Glasg., has been appointed Demonstrator of Anatomy in Queen Margaret College, and Miss D. Clark Demonstrator in the botanical laboratory. Mr. W. H. Lang, B.Sc, is the new Lecturer on Botany in the College, succeeding Mr. J. C. Willis, M.A., who some months ago was appointed Director of the Botanic Gardens at Colombo.—The class of practical pathology in the Pathological Institute at the Western Infirmary is being conducted by Mr. L. R. Sutherland, M.B. Glasg., Professor Joseph Coats being absent on sick leave. It is satisfactory to know that the latest reports concerning Professor Coats are decidedly favourable, and that his enforced rest is likely before long to lead to the complete restoration of his health.—At a meeting of the Natural History Society, held on the 29th ult., Professor F. O. Bower, D.Sc., delivered a lecture on Fixity of Position as a Factor in Plant Life.—The statistics of the preliminary examinations issued by the Joint Board of Examiners show that of 488 candidates in the arts and science faculties in the University of Glasgow 216 satisfied the examiners, and of 81 entrants in the faculty of medicine 37 only passed.

Handsome Bequests.

By the will of the late Miss Martha Brown of Waterhaughs a sum of £97,000 is conveyed to trustees for distribution among various charitable and educational institutions. The West of Scotland Home for Incurables receives £21,000, and a similar sum goes to the corresponding institution in Edinburgh; the Universities of Edinburgh and Glasgow, the Royal Infirmary of Edinburgh, and the Royal Infirmary of Glasgow are each allotted £5000; the Sick Children's Hospital, Edinburgh, and the Western and Victoria Infirmaries,

Glasgow, receive £1000 each; and smaller sums are donated to the special hospitals and nursing institutions.

The Proposed West of Scotland Consumptive Hospital.

A further appeal has been made on behalf of this scheme. Donations of £500 and £250 are acknowledged and suggestions for further contributions are made. One of these indicates the necessity for £3000 to build a dispensary in Glasgow, another is for £300 "to provide a sun bath." The objection to the spending of £3000 in the erection of a dispensary on the ground that such an institution will simply come into competition with existing dispensaries and allied organisations has already been indicated in THE LANCET, and a recent correspondence published in the local press shows that this objection at least commands some sympathy. Meanwhile the medical committee understood to be supervising the arrangements makes no sign. The profession and the public generally naturally expect some guidance from the committee, but since Professor Gairdner's letter to THE LANCET announcing the fact that the committee had so far not been consulted silence has reigned supreme. If the committee is still in existence it is surely high time that it either publicly supported the scheme as published or divested itself of further responsibility.

Eye Infirmary, Paisley.

It is announced that in connexion with the Diamond Jubilee, Provost Mackenzie has intimated his intention to present to the town an infirmary to be devoted to diseases of the eye.

May 4th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Children's Hospital, Temple-street, Dublin.

IN aid of the funds of this hospital a fête arranged on a very large scale was formally opened by Her Excellency Lady Cadogan on the 4th inst. There was a very large attendance of the friends and patrons of the hospital and of the general public.

The Mater Misericordiæ Hospital.

The complimentary dinner given by the medical board of the hospital to its football team took place at the Hôtel Métropole, Dublin, on May 3rd. The members of the medical staff, both visiting and resident, were present and numbered, with their guests, somewhat over sixty.

Outbreak of Typhoid Fever.

At the meeting of the City Council, held on May 1st, it was reported that during the previous four months the medical practitioners of Belfast had notified 416 cases of zymotic disease, and of these 289 were typhoid fever, and as Dr. O'Neill (one of the city councillors) pointed out, if the March cases are added, 641 persons had been notified as suffering from this disease during the two months of March and April. The outbreak is principally among young people. It is a question whether there is any real increase in the number of cases, the apparent largeness of the numbers being due to the more correct information obtained by the working of the Notification of Infectious Diseases Act adopted recently in Belfast. The latest returns show that the death-rate of Belfast is 27·9 per 1000, 9 5 for chest affections and 4 6 for zymotic diseases. Numerous suggestions as to the prevention of typhoid fever were brought forward at the meeting of the council, such as boiling the milk and water, &c.; and a conference of all the medical officers was held some time since in reference to this most important question, but the result of the meeting has not yet been made public.

May 4th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Locomotor Ataxy.

AT the Academy of Medicine a communication was recently made by MM. Gilles de la Tourette and Chipault upon the treatment of locomotor ataxy by stretching of the spinal cord which created much public excitement, being reproduced in the lay journals. These observers, having opened the spinal canal in the dead body and exposed the cord, proved that whilst suspension only results in a trifling elongation forcible curvature of the back produces a very real increase in length, amounting to more than a centimetre. They then applied this treatment of incurvation to forty ataxic subjects. They placed the patient in a sitting position on a table and drew his back forwards until his chin nearly touched his knees by means of a cord passing through a pulley-block fixed to the table and attached to a kind of corset fitting tightly to the shoulders and back of the subject. A dynamometer measured the degree of traction exercised. This treatment was afterwards applied by M. Gilles de la Tourette to forty-seven ataxic patients, twenty-two of whom are said to have experienced a cessation of almost all their symptoms—lightning crises and vesical paralysis among others—and fifteen others to have found benefit from the treatment, while ten remained unaltered. At a subsequent meeting of the Academy M. Blondel made a communication which somewhat dashed the enthusiasm with which the discovery of MM. Gilles de la Tourette and Chipault had been received. He mentioned that he had already published some two years ago a note on the treatment of locomotor ataxy by means of forcible incurvation of the spinal column, and that he had obtained remarkable success in one case where lightning pains had been present, while Erb, in a treatise on ataxia, had pointed out the value of the method. M. Blondel had employed the treatment in five cases and met with one success. He believed that it would succeed chiefly in cases of early disease of the posterior columns where the sclerosis was not too hard to yield to elongation, but that in old cases of sclerosis the effects would be *nil*. He pointed out that the anatomical fact that the cord was lengthened by the process of incurvation had been demonstrated on the dead subject by Bonuzzi.

Surgical Interference in Suppurative Peritonitis.

At the *Société de Chirurgie* a long discussion has taken place upon the rules which should guide surgical interference in cases of suppurative peritonitis. M. Jalaquier had under observation certain cases, one of which healed spontaneously by discharge of a collection of pus through the umbilicus, while of four others one patient was operated upon and died. The virulent agent was the pneumococcus. M. Jalaquier, in reporting upon these cases, objected to the employment of solutions of corrosive sublimate for washing out the peritoneal cavity, preferring to use saline solution. M. Gerard Marchand thought that many cases of peritonitis caused by the pneumococcus assumed the encysted form and that the limitations by adhesions explained the numerous spontaneous cures. The surgeon, he considered, ought not to forget the action of these adhesions, but should make use of them during operation as a ready-formed barrier against the spread of the mischief. It is particularly important to operate before symptoms of toxæmia appear. Pain, distension, vomiting, and scanty urine made a group of symptoms authorising interference. The incision should be made in the middle line. The pus being evacuated and the appendix resected if necessary the peritoneal cavity should be asepticised and drained and all shreds of lymph should be removed. Bleeding points should be compressed immediately, and, finally, iodoform gauze should be loosely packed into the cavity. One drainage tube is sufficient. MM. Rontier Nélaton and Quénu took part in the discussion and laid stress on the difficulty of diagnosis.

A Curious Outbreak of Typhoid Fever.

Professor Laveran has published accounts of several cases of typhoid fever occurring in a military dépôt among the non-commissioned officers. The private soldiers escaped infection and the water used at the barracks was of irreproachable quality. Microscopic examination of the food served to the non-commissioned officers revealed the presence of the bacillus typhosus in abundance on the salad, and the ova of the tænia solium were also discovered on these too generously manured leaves. M. Laveran pointed out, in conclusion, that it was impossible to be too careful in the preparation of uncooked garden stuff for the table, and that this precaution applied especially to strawberries.

Poisoned Fish.

A barge freighted with sulphate of copper has "turned turtle" in the Seine, in the basin of La Villette. Pumps were

got to work at once, but the water in the basin became rapidly saturated and a large quantity of poisoned fish soon made their appearance on the surface of the water. Only the strenuous intervention of the police prevented many of the populace from poisoning themselves by carrying away and eating the fish.

The Closing of Two Cemeteries at Versailles.

Two cemeteries have been closed at Versailles, the clayey soil being found quite unfitted for the reception of bodies. Not only were the coffins on inspection found practically unaltered after six years' burial, but the enclosed corpses had for the most part escaped putrefaction.

May 3rd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

International Congress of the Red Cross.

IN time to catch the members of the International Congress of Medicine and Surgery on their return from Moscow, the sixth International Congress of the Red Cross is organised to meet at Vienna. This, it is expected, will be the most important congress of the series. All the Powers, great and small, as signatories of the Geneva Convention, will be represented at its sittings. Italy, who claims to have conceived and planned, if not actually to have "put on wheels," the entire movement, will send the President of her own organisation, the Count Taverna, assisted by the Commendatore Becchi, Counsellor of State, and Dr. Gaetano Mazzoni, Professor of Clinical Surgery in the Roman School. She will also contribute her experience in the Abyssinian campaigns, rich in suggestions for the still further improvement of the ambulance service in mountainous countries. Rome, it will be remembered, from the full reports furnished by THE LANCET[1] at the time, was the scene of the last (the fifth) International Congress of the Red Cross, and it will also be within the memory of its readers from similar reports in these columns that at the International Congress of Medicine, held two years later in Rome, a distinctive feature was the exhibition of Red Cross *matériel*, much of which was tested sooner than was anticipated in the disastrous campaigns aforesaid. These, however, are not the only military operations on a grand scale which have occurred since the rising of the last International Congress. There has been the war between China and Japan, in which the latter (and victorious) belligerent vindicated its right to rank with the civilised Powers by its effective adoption of Red Cross organisation and methods—a step which it followed up by delegating M. Nagao Ariga, its special commissioner, to Geneva, by way of still further putting itself in touch with Western Europe as to the means for alleviating the miseries of war. In the day now passing, moreover, we have the Græco-Turkish campaign and its lessons in Red-Cross intervention, and who knows what further complications may not increase the war area and put the resources of the organisation still further to the test? In the thirty-three years ending July, 1896, there have been on an average sixteen nations engaged in hostilities every twelve months! These statistics were put *en évidence* last year in the interesting brochure illustrating the magnificent Red Cross chart on view at the Geneva Exhibition, and while they dealt with "little wars," such as the Duke of Wellington used to deplore, the lessons they taught as to the necessity for increased efficacy on the part of the Red Cross are driven still further home by the sanguinary outbreaks in the East, notably the Armenian and Cretan butcheries, culminating in the severe fighting on the Thessalian frontier. The programme for the "Conférence Générale des Sociétés de la Croix Rouge" (to give it its official name), which meets next autumn in Vienna, will, it is probable, be unprecedentedly full, even if it does not witness accessions from a quarter unrecognised at preceding Congresses. That quarter, as was shown in a leading article in THE LANCET,[2] is the civilian world, in which calamities on an increasingly extended scale are coincident with the development of industries and the aggregation of masses of workers in ever-augmenting numbers. Proposals have been formulated, principally by the "Congrès International de Samaritains" originating at Vienna, to utilise the resources of the Red Cross for the disastrous mining accidents, railway casualties, conflagrations, to say nothing of floods, famines, and even pestilences, all too characteristic of the nineteenth century, and so to provide for the twentieth a prompter and more effective system of relief than has hitherto been available. These proposals, probably to be renewed at the approaching Congress, are not (as, indeed, THE LANCET showed) regarded favourably at Geneva, and the argument that their introduction would encumber a programme already ample enough for the time may be utilised to shelve them altogether. Still, there is force enough in these said proposals to impress public opinion, and even to make converts to their reasonableness among the nationalities represented at the Congress; indeed, I can vouch for the fact that Italy is prepared to go a considerable way at least in entertaining them and in passing them through the alembic of discussion. If an alliance could be effected by the "civilian" with the "combatant" organisation, and a "grande armée" mobilised for the relief of suffering inflicted on an extended scale, their twofold resources could be placed at the service of either branch, according as circumstances required—the reserves of one being put at the disposal of the other and *vice versâ*. For one thing, the carrying out of the idea would demand much assistance from the medical and surgical profession, and might, as, indeed, THE LANCET indicated, open an outlet for its surplus hands. As I close this letter I learn from a report just handed to me of the General Assembly of the Italian Red Cross (president, Count Taverna) that in spite of the heavy drain of the Abyssinian war the organisation has a balance of 6,000,000 lire, including the value of its *matériel*. It has in the kingdom 360 sub-committees and 109 ladies' sections, with a total of 25 000 members. It possesses 82 transportable hospitals capable of admitting and treating 7000 wounded, and served by 1000 medical officers, pharmacists, and administrative hands, with 2500 men-nurses and helps.

May 2nd.

[1] THE LANCET, April 16th and 30th, and May 7th, 1892.
[2] THE LANCET, Students' Number, Sept. 2nd, 1893, pp. 536–37.

MONTREAL.

(FROM OUR OWN CORRESPONDENT.)

Golden Wedding Celebration.

AN interesting occasion, a few days ago, was the golden wedding anniversary of Sir J. William and Lady Dawson. Mr. Dawson (as he then was) was appointed Principal of McGill University over forty years ago, when it was in a very weak state, the medical faculty being the only section that was at all vigorous. The wonderful growth of the University in wealth and extent is very properly associated with Sir William Dawson's connexion with it. On the occasion of the celebration congratulations poured in upon him and his esteemed lady from graduates from all parts of the world. The various faculties presented costly and beautiful gifts, with addresses expressing the highest sentiments of respect and esteem for the ex-Principal. Sir William Dawson is now enjoying the *otium cum dignitate* of Emeritus Principal of McGill University, and devoting his time to authorship.

Medical Convocation.

At the convocation of McGill University just held seventy-six gentlemen received the degree of M.D. The number of graduates in the class of the first year of Mr. Dawson's Principalship was nine. This is the last year in which medical "capping" will take place in April. The course now consists of four anni medici of nine months, and graduation must necessarily take place at a later date. The immense attendance at meetings of convocation of the medical faculty has quite outgrown the capacity of the old hall of the College, and these meetings have been held "down town". This year's meeting was held in the largest playhouse, which was quite filled. Sir Donald Smith, Chancellor, presided. A most interesting announcement was made during the meeting, that a brother of a deceased professor of physiology had added to his previous benefactions £5000 for a Drake Physiology Memorial. Laval University (French Catholic) in its medical faculty has just graduated thirty-five men; Bishop's College, eight persons, two being women (this is the only medical school which admits women); the Faculty

of Comparative Medicine, McGill, thirteen; the College of Dentistry twelve; and the College of Pharmacy twelve.

The Diamond Jubilee.

Various schemes are being discussed for the great celebration here. Many plans of an attractive character have been sketched. The matters of medical interest are a Hospital Jubilee Fund and a Victorian Order of Nurses. This scheme is earnestly and vigorously supported by Lady Aberdeen, the wife of our popular Governor-General. It is not local, but is to be for the whole Dominion of Canada. The particulars have not been given to the public, and, indeed, may not yet be settled in the minds of the proposers. Much correspondence has already appeared in the newspapers, generally favourable to a scheme of this kind, as a permanent memorial of the great event.

British Medical Association.

The meeting of the British Medical Association will be the great medical event of the year. The entire profession is filled with pleasant anticipations of the visit of the many leaders in various departments of medical work who will attend. The Montreal General, the senior hospital, has been receiving attention, extension, and alterations, and will be made as attractive as possible to the medical visitors. The splendid Victoria Hospital will appear at its best. The various committees for the meeting have done an immense amount of work. The committee on invitations has been rather surprised at the number of possible American visitors to the meeting, and a note of warning has been uttered that this is not a pan-medical congress. Some New York journals, fearing the effect of the Montreal meeting on the Philadelphia meeting of the American Medical Association, have flatly stated that they hope no American physicians will attend the British Medical Association unless as the invited representatives of some society or association. There is every reason to believe the meeting will be a great success, although the early anticipations of the large numbers who would attend from England and Europe have been modified somewhat. The committee on exhibits has had a curious experience. A large and excellent hall, the Victoria Skating Rink, was secured and the floor-space laid out in an attractive lithographic plan, and high prices were asked for space, on the supposition that exhibitors would be tumbling over one another in their anxiety to secure places. As, however, there has been no hysterical clamour for space the prices have been brought down. The contractor for the handbook has been disappointed also in the advertising patronage he has been able to secure. This has caused delay, but the book will be issued all the same, and probably during the present month.

Enterectomy and Gastrostomy.

Dr. F. J. Shepherd showed a patient, at a recent meeting of the Medico-Chirurgical Society, an adult male, from whom he had Removed Eight Feet of Small Intestine. The case was one of benignant tumour of the abdomen with extensive adhesions. The patient was in excellent condition.—Mr. Kirkpatrick showed a young woman on whom he had operated for Gastric Ulcer. The patient had been seized while at work with a violent pain in the epigastrium, and was removed to the Montreal General Hospital. Although there was no history of gastric trouble the localised tenderness and suddenness of the attack led to the diagnosis of a ruptured gastric ulcer, and gastrostomy was performed at once. A rupture of the size of a threepenny-piece was found on the anterior surface of the stomach, and the contents of the viscus had escaped. After secure suturing an opening for drainage was made in the abdominal wall lower down, and from this a pint of fluid escaped. The patient made an excellent recovery and left the hospital four weeks after the accident.

April 17th.

SAD DEATH OF A MEDICAL MAN.—A sad death occurred at Uckfield on Sunday last as the result of a bicycle accident. Dr. A. J. Richardson, assistant physician to the Sussex County Hospital, was thrown from his bicycle on Friday, April 23rd, and received injuries causing concussion of the brain and severe lacerated wounds of the face. Until the following Thursday he was progressing favourably, but at that date symptoms of tetanus manifested themselves, and he died at midday on Sunday.

Medical News.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the April sittings of the Conjoint Board held in Glasgow the following candidates passed their respective examinations, those marked with an asterisk (*) passing with distinction:—

First Examination, Five Years' Course.—*John Allan, Glasgow; George Russell Jarvie, Cambuslang; Archibald Buchanan Laidlaw, Glasgow; John Kean, Newry; Frederick C. Willmott, South Africa; John William Dougall, Halifax, N.S.; John Arthur Doyle, Kilkenny; William A. Cole, Lagos, West Africa; John Stewart, Glasgow; William Turner, Glasgow; Robert A. Hamilton, Campbeltown; James S. Colquhoun, Durham; James N. M'Morris, Newfoundland; and David Fyfe, Glasgow.

First Examination, Four Years' Course.—William M. M. Jackson, Brighton; John Robertson, Aberfeldy; Dhanaindranatha Mittra, Bengal; Thomas F. Blake, Andover; and Thomas Marshall Metcalfe, Liverpool.

Second Examination, Five Years' Course.—Duncan M. Macgregor, Oban; Thomas Blane Adam, Glasgow; David Coffey, Ballinahinch; *Joseph Fulton, county Antrim; John George Grant, London; George F. Stoney, Tipperary; Thomas R. W. Atkins, Cork; Lionel R. Popham, Bantry; George Evans, county Londonderry; Alfred Lionel Johnston, Belper; David Scott Russell, Glasgow; and George B M'Kendrick Overtown, Wishaw.

Second Examination, Four Years' Course.—Louise Fox, India; Richard Brodie, Inverness; Robert J. Morgan, county Antrim; Andrew Dougall, Glasgow; Lilian Edith Sykes, Calcutta; David R. Edwards, Carmarthen; Patrick William M'Hugh, Enniskillen; Alfred B. S. Powell, Kingston-on-Thames; Charles Abbott, Leeds; Daniel Patrick G. O'Sullivan, Cork; Reginald Cecil M. Hoare, Aston, Birmingham; and Frank Hart B. Gaden, Queensland, Australia.

Third Examination.—*Richard Staward, Northfield; Edward H. Harrison, Belfast; William Carey, Haywood; Abraham J. B. Albertyn, Cape Colony; Henry A. Marquis, Lancashire; Robert Mackie, Glasgow; and William Hutton, Greenock.

Final Examination, and admitted Licentiates of the three co-operating authorities.—Charles Frederick Spinks, Maryhill; George Harper Pearce, Redcar; William B. K. Richards, Ross, Herefordshire; Edmund P. Hewitt, Edinburgh; Albert Ernest Blades, Derby; Reginald P. H. Whitmarsh, Brighton; Benjamin Wade, Pudsey; Alexander Kennedy, Ayr; Jane Boyes, Glasgow; Allan Edgar Hawkins, Portobello; Alexandre da Fonceca Dias, Portobello; John William Mackay, Trinity; and James Hamilton Stuart, Edinburgh.

UNIVERSITY OF CAMBRIDGE.—Third M.B. and B.C. Examination, Part I. (Surgery and Midwifery). The following have been examined and approved:

Allfrey, B.A., Trinity; R. H. Bell, B.A., Trinity; Coleman, B.A., St. John's; A. W. Daniel, B.A., Emmanuel; Deller, B.A., Trinity; Forbes, B.A., Christ's; Grey, B.A., Trinity; Gregory, B.A., St. John's; Harrison, B.A., Magdalen; Heilborn, B.A., Caius; Irving, B.A., Caius; Jephcott, B.A., Caius; Lindsay, B.A., Sidney; W. F. Lloyd, B.A., Clare; Lowe, B.A., Jesus; Mathias, M.A., Christ's; E. A. C. Matthews, B.A., Trinity; H. D. O'Sullivan, B.A., Emmanuel; Prest, B.A., St. John's; Roderick, B.A., Emmanuel; Rowland, B.A., Downing; B. H. Slater, B.A., Trinity; C. White, B.A., Christ's; E. A. Wilson, B.A., Caius; W. R. Wilson, Corpus; and Yeld, B.A., Trinity.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—At the Convocation held on April 24th the following degrees were conferred:—

Doctor in Medicine.—James Arnott, M.B., B.S. Durh.; Edward James Brewis, M.B., B.S. Durh.; Henry Fawcett, M.B., B.S. Durh.; Charles Gilbert Burrington Kempe, M.B., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond.; Cuthbert Umfreville Laws, M.B. Durh., M.R.C.S. Eng.; William Martin, M.A., M.B., M.S. Durh.; William Ernest Peacock, M.B., B.S. Durh.; William Harland Peake, M.B., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond.; James Atkin Henton White, M.B., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond., F.R.C.S. Edin.; and Francis James Worth, M.B., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond.

Doctor in Medicine (practitioners of fifteen years' standing).—Joseph Hamilton Balfe, L.R.C.P. and S. Edin.; John Cahill, F.R.C.S. Eng.; Henry Clarke, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A.; Edward Cluneglas Davies, M.R.C.S. Eng., L.R.C.P. Lond.; Robert Hugh Hodgson, M.R.C.S. Eng., L.R.C.P. Edin.; Sydney Robert Lidiard, M.R.C.S. Eng., L.R.C.P. Edin.; and Francis Wm. Sutton, M.R.C.S. Eng., L.S.A.

Bachelor in Medicine.—John Charles Anderson, London Hospital; Mervyn Alexander Archdall, College of Medicine, Newcastle-upon-Tyne; John Joseph Foster, M.R.C.S. Eng., L.R.C.P. Lond., Guy's Hospital; Thomas Harold Gibbs, Alfred Phillips Lloyd, John Lowry, Daniel Wells Patterson, Albert Garthorne Widdowfield Pearson, and William Simpson, College of Medicine, Newcastle-upon-Tyne; Charles Seaver Smith, Mason College, Birmingham; Robert Alfred Wilson, College of Medicine, Newcastle-upon-Tyne; John Hutchinson Wood, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; and Thomas Woodman, College of Medicine, Newcastle-upon-Tyne.

Bachelor in Surgery.—Mervyn Alexander Archdall, Richard Henry Bellwood, M.B. Durh., Thomas Harold Gibbs, Wilfred Robert Kingdon, M.B. Durh., John Lowry, Daniel Wells Patterson, Albert Garthorne Widdowfield Pearson, and William Simpson, College of Medicine, Newcastle-upon-Tyne; Charles Seaver Smith, Mason College, Birmingham; Robert Alfred Wilson, College of Medicine,

Newcastle-upon-Tyne; John Hutchinson Wood, St. Bartholomew's Hospital; and Thomas Woodman, College of Medicine, Newcastle-upon-Tyne.

Bachelor of Hygiene.—John Stratford Hall, M.B., B.S. Durh.; James Henry Hunter, M.D., B.S. Durh.; and Peter Robert Ingram, M.B., C.M. Aberd.

Diploma in Public Health.—Frederick Smith, L.K.Q.C.P., L.R.C.S. Irel.

MEDICAL MAGISTRATE.—Mr. Fred. J. T. Sawkins, M.B., Ch.M. Syd., medical superintendent of the Prince Alfred Hospital, Sydney, has been appointed a Justice of the Peace for New South Wales.

CHURCH SOCIETY FOR THE PROMOTION OF KINDNESS TO ANIMALS.—The Dean of Winchester presided at the fourth annual meeting of the Church Society for the Promotion of Kindness to Animals held recently, by permission of the Duke of Sutherland, at Stafford House. Letters of regret at inability to attend from fourteen English and three colonial bishops and from many others were laid upon the table. A resolution in favour of further legislation respecting slaughter-houses and an enactment whereby the title "domestic" in the Prevention of Cruelty Acts be made to include all animals placed in confinement was moved by Colonel Barrington Foote, seconded by the Rev. A. H. A. Smith, and carried. A resolution urging ladies to give up the wearing of feathers in cases where the procuring of them involved cruelty was proposed by Mrs. Lemon, hon. secretary of the Society for the Protection of Birds, seconded by General Lowry, C.B., and carried. A discussion on the muzzling of dogs ensued, and ultimately the following resolution was adopted: "That in the interest of animals the muzzling order should be extended to the whole of Great Britain and Ireland, accompanied by quarantine and subsequent registration." Votes of thanks to the Duke of Sutherland and the chairman closed the proceedings.

PRESENTATIONS TO MEDICAL MEN.—Mr. Conolly Norman, F.R.C.P., F.R.C.S. Irel., resident medical superintendent of the Richmond District Asylum, Dublin, at a largely-attended meeting of the staff, several governors, and medical friends, held in the dining-hall of the institution on April 27th, was presented with a beautiful illuminated address by the staff of the asylum, on the occasion of his resuming duty after a long illness. At the same time Mrs. Norman was the recipient of a present of silver as a small memento of the occasion.—Mr. Wm. Gardner, L.R.C.P. Lond., M.R.C.S. Eng., on leaving the Warwick County Asylum at Hatton recently, was the recipient of a handsome silver centre bowl and cigarette-case, the gift of the nurses and attendants. Dr. A. Miller, the medical superintendent, in making the presentation on behalf of the nursing staff, said that although Mr. Gardner had been amongst them only a short time, he had endeared himself to all by his kindliness of manner, and would take away with him the good wishes of all for his future welfare.—The members of the St. John Ambulance Classes at Brockhampton, Gloucestershire, have recently presented Mr. William Cox, M.R.C.S. Eng., M.S.A., of Winchcombe, with a silver revolving breakfast dish as a mark of appreciation of his services as honorary lecturer.

MUNICIPAL LODGING-HOUSES.—Two schemes have been submitted by the borough engineer to the corporation of Southampton for the proposed dwellings to be erected on the slum area which has just been cleared. The first scheme suggested a lodging-house for 297 nightly lodgers, no provision being made for families. The cost of this was put at £23,146 10*s*., or £1104 4*s*. 8*d*. annually. The second scheme allows for a lodging-house to cost £14,066, or £642 12*s*. yearly, and another block to be used as artisans' dwellings, and estimated to cost £7080 10*s*., or £323 19*s*. 8*d*. yearly. The second named lodging-house would take 216 nightly lodgers and the artisans' dwellings would be on the lines of those erected by the London, Manchester, and Sheffield Railway Company in St. John's Wood. The medical officer reporting on the matter recommended the second scheme. He said he had calculated that the first would mean an annual loss of £229 4*s*. 8*d*.; the second a yearly profit of £324—£274 on the lodging-house and £50 on the dwellings. He added: "I am bound to state that I cannot explain why the buildings do not show a greater profit, as buildings which have been erected at other places show large profits; the only conclusion I can come to is that the estimate for the buildings must have been made on a liberal scale." The second scheme has been practically adopted by the corporation.

GERMAN HOSPITAL, DALSTON.—The fifty-second annual dinner in aid of the German Hospital, Dalston, was held at the Hôtel Métropole on April 30th. The chair was taken by the Duke of Cambridge, the President of the hospital, who said that an addition of ten beds had been made to the accommodation provided for female patients, and that the children's wards had been much improved. Alterations in the sanitary and lighting arrangements were much required, and for these an outlay of £3000 would be necessary. The benefits of the hospital were by no means restricted to patients of German nationality, many of them, both in-patients and out-patients, being English residents in the vicinity. During the evening a selection of music was performed by Madame Marchesi, Herr Johannes Wolff, and others. The secretary announced a list of subscriptions and donations amounting to £3300, including £250 from the German Emperor, £50 from the Emperor of Austria, £100 from Baron Schröder, and £20 from the President.

THE NEWPORT (MON.) WATERWORKS.—Some uneasiness is felt at Newport with regard to the position of affairs at the new waterworks at Wentwood, which are situated about eight miles from the town. A considerable amount of opposition was originally raised to this site, but the corporation, acting upon expert opinion, let the contract to a Glasgow firm for £95,596. When the work was in progress, however, it was found that the puddle trench had to be sunk much deeper than was at first anticipated, and as this would involve a large additional outlay the corporation obtained fresh advice, the result being that one expert was averse to the work proceeding, while another recommended the corporation to proceed with the work themselves, advising that concrete be added to the reservoir to give additional security. This latter advice was followed, and the original contract was mutually cancelled. For about twelve months the work has been conducted by the corporation, the trench being sunk about 100 ft. A few days ago a test of the puddle trench was made, when it was found that the water oozed in an unsatisfactory manner. The waterworks committee, at their meeting on April 28th, acting upon expert advice, decided to have further tests made, when it is hoped that more satisfactory results will be obtained.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 21st, Mr. Chicken being in the chair.—Dr. Porter read a paper on the Relation of Dentistry to General Practice, in which he said that although many medical men consider they are in no way responsible for the care of their patients' teeth, they can often save patients from the effects of their own ignorance, as, for instance, by urging the necessity of a periodical examination of the teeth; this is especially true in regard to the teeth of children. The pathology of dental caries was briefly discussed to show that it was not in any sense of the word an inflammation. In considering the immunity of certain persons from dental caries, Dr. Black's recent experiments were quoted as showing that it did not necessarily depend upon the density or percentage of lime salts contained in the teeth. The preventive treatment of caries was shown to consist chiefly in a strict attention to oral hygiene and extraction in overcrowded mouths, constitutional remedies being of no direct practical value. General anæsthesia in dental operations was the next question discussed. It was pointed out that for the great majority of such operations nitrous oxide fulfilled all requirements. Should prolonged anæsthesia be necessary the preference was given to nitrous oxide followed by ether. The use of chloroform was strongly deprecated, statistics being given to show the high percentage of deaths from the use of chloroform in dental operations. In conclusion, the severe constitutional symptoms attending alveolar abscess were mentioned, their true cause often being overlooked.—Dr. Hunter showed a stereoscopic photograph of a patient suffering from an Aneurysm of the Femoral Artery.—Dr. Tresidder showed for Dr. Marshall a photograph of a hand showing Onychomycosis. The patient was a boy who had suffered from ringworm of the scalp for years.—Mr. Chicken showed a chart of the temperature of a patient suffering from Diphtheria. Various local applications were used at first with apparently no effect, but eucalyptus oil produced an immediate and marked lowering of the temperature. The pure oil was used and freely painted on the throat. Mr. Chicken also exhibited a skiagraph showing a Coin impacted in the Œsophagus.

ROYAL INSTITUTION.—The annual meeting of the members of the Royal Institution of Great Britain was held on May 1st at the house of the institution in Albemarle-street, Sir James Crichton Browne, M.D. Edin., F.R.S., treasurer and vice-president, presiding. The annual report of the committee of visitors for the year 1896, testifying to the continued prosperity and efficient management of the institution, was read and adopted. The following gentlemen among others were unanimously elected as officers for the ensuing year:—President: The Duke of Northumberland. Treasurer: Sir James Crichton Browne. Secretary: Sir Frederick Bramwell, Bart. Managers: The Right Hon. A. J. Balfour, Lord Lister, Mr. William Crookes, Mr. Edward Frankland, Dr. Donald W. C. Hood, Mr. Victor Horsley, Mr. William Huggins, Dr. A. W. Rücker, and Sir Henry Thompson. Visitors: Dr. W. A. Brailey and Sir Francis Laking.

DIPHTHERIA IN LONDON.—The deaths registered as due to diphtheria in London last week were identical in number with those registered in the week preceding—namely, 40. In the four weeks ended on May 1st the registered deaths have been 23, 30, 40, and 40, the latter being 8 in excess of the corrected decennial average for the seventeenth week of the period 1887-96. Three of the 40 deaths were of infants under one year of age; 23 others occurred in children aged from one to five years; and 3 were of persons aged over twenty years. Lambeth was credited with 5 deaths, and Hammersmith, St. Pancras, Hackney, Shoreditch, and Poplar sanitary areas were respectively credited with 3 deaths. The admissions to hospitals in the week numbered 102, against 103, 83, and 96 in the preceding three weeks; and 767 patients suffering from diphtheria remained under treatment on May 1st. In the outer ring of London there were last week registered 9 deaths from the disease, of which 3 occurred in Brentford, 3 in Edmonton, and 2 in West Ham districts.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Plumbers' Registration Bill.

THE HOUSE of Commons, at its sitting on Friday, April 30th, gave a second reading to the Plumbers' Registration Bill and referred the measure for further consideration to the Grand Committee on Trade. The Bill provides for the examination and registration of plumbers, and while creating no monopoly seeks to prevent unqualified men representing themselves as registered.

Public Burial Grounds.

The House of Commons, on the motion of Mr. J. W. Sidebotham, has decided to appoint a Select Committee to inquire into the subject of burial grounds provided by local authorities, whether any alterations in the existing law are necessary, especially in regard to the consecration of the ground, the provision of chapels, the allocation of fees, and the appointment of chaplain.

Budget Figures.

As usual, in making his Budget statement the Chancellor of the Exchequer gave some account of the food and drink consumed by the people of these islands during the year. As testifying to the prosperity of the country he said that during the past year our people have smoked and drunk more, have earned more money and paid more Income Tax, have written more letters and have paid more Death Duties. The receipts from Customs last year were £21,254,000, or £438,000, representing 2·4 per cent., above the receipts of 1895-96, the estimated increase of the population in the year being 0·8 per cent. The two groups of coffee and dried fruit showed a trifling improvement, which was, he feared, not likely to be maintained owing to the war in the East. Foreign spirits produced a net revenue of £3,316,000 or £99,000 more than in 1895-96. This was due to an increase of £125,000 in the receipts from rum, which, said Sir Michael Hicks Beach, was a most unaccountable article. It had been a favourite Customs theory that the receipts from rum went up as the thermometer went down, but considering the temperature of last winter he did not think that that theory could be maintained. Tea had produced £3,830,000, or £54,000 more than in 1895-96; tobacco £11,013,000, or £265,000 more than in 1895-96; and wine £1,295,000, or £40,000 more than in 1895-96. This increase in wine, he said, was a novelty of recent years. He believed it was mainly due to the increased duty which was imposed some years ago by Mr. Goschen upon sparkling wines. The taste for what was erroneously called champagne was very largely increasing. Coming to Excise, the Chancellor of the Exchequer said that the receipts amounted to £27,463,000, or £630,000 more than in 1895-96. Beer showed an increase of £181,000 and spirits of £434,000.

Treatment of Habitual Offenders.

On Tuesday, May 4th, in the House of Commons, Sir Charles Cameron moved, and Dr. Farquharson seconded, a resolution in favour of the institution of adult reformatories for the special treatment of habitual offenders and misdemeanants on the lines recommended by the Departmental Committee which inquired into this subject in Scotland. Sir Charles Cameron addressed the House at some length in support of the resolution, but Dr. Farquharson had not got far with his speech when the attention of the Speaker was called to the fact that there were less than forty members present, and the House was counted out. Consequently no decision was arrived at on the subject.

Public Health (Scotland) Bill.

The Grand Committee on Law of the House of Commons began on Tuesday, May 4th, the consideration of the Public Health (Scotland) Bill, and at the end of a long sitting had got through five of the sixty-three pages of amendments. There was some debate as to the qualifications to be required of medical officers in burghs, in which Sir William Priestley and Sir Charles Cameron took part. The upshot of the business was a compromise allowing men without a particular diploma to be appointed only with the express consent of the Local Government Board.

HOUSE OF COMMONS.

THURSDAY, APRIL 29TH.

Vivisection Certificates.

Mr. Weir asked the Secretary of State for the Home Department if he would state the number of persons in England, Scotland, Ireland, and Wales respectively licensed to practice vivisection, and how many of them held certificates to dispense with anæsthetics.—Sir Matthew White Ridley replied that the number of persons licensed at the present time in England was 145, in Scotland 52, and in Wales 1; the number holding the certificate dispensing with anæsthetics was in England 86, in Scotland 30, and in Wales none. The only figures in his possession as regards Ireland were those for 1896; in that year the number of licences was six, of whom one held a certificate dispensing with anæsthetics. In giving the hon. Member these figures he might remind him that the certificate in question was never given for operations involving serious pain, but only for such operations as inoculations or hypodermic injections.

Dog Muzzling.

Mr. A. Drucker asked the President of the Board of Agriculture whether he was aware of the fact that the majority of local bodies had not adopted the system of muzzling dogs recommended by the Departmental Committee, and also that many recognised authorities were against such compulsory muzzling; whether the said Committee took steps to ascertain the views of well-known breeders before making their report; and if, considering the fact that muzzling entailed serious inconvenience upon the owners of dogs and grave injury to the health of the animals, he would facilitate further inquiry.—Mr. Walter Long said, in reply, that he found it somewhat difficult to understand what his hon. friend meant by his first question, inasmuch as the Departmental Committee recommended that muzzling orders should be made in future, not by local, but by central authorities. He was aware, of course, that compulsory muzzling did not commend itself to everyone, but the question was fully discussed from all points of view before the Committee, who also took evidence from breeders. This being the case, he could not assent to the suggestion that further inquiry was necessary.

Death from a Bite of a Cat.

Mr. Duncombe asked the President of the Board of Agriculture whether his attention had been called to the death of Mr. John Hetch, sixty years of age, who died in the Queen's Hospital, Birmingham, from the effects of a cat's bite; whether he was aware that the medical evidence proved the death to be undoubtedly the result of rabies; and whether he was prepared, either by issuing a universal muzzling order for cats, or otherwise, to guard against the danger that as shown to exist.—Mr. Walter Long said that his attention had been called to this lamentable case, which seemed undoubtedly to have been one of hydrophobia due to the bite of a cat. He did not think that any direct action against rabies in cats was either practicable or necessary. The information in his possession went to show that the disease was usually conveyed from dogs to cats, not *vice versâ*, and, in fact, no cases under the latter head were known to him. If, therefore, they succeeded in their efforts to stamp out rabies amongst dogs in this country the disease was not at all likely to be kept alive by means of cats. He might, perhaps, add for the assurance of owners of cats that out of 1075 persons treated for hydrophobia at the Pasteur Institute during the first nine months of 1895 1039 had been bitten by dogs and only 36 by cats.

London Water Question.

Mr. Chaplin announced that the names of the members of the Royal Commission on the Water-Supply of London are as follows:—The Right Hon. Lord Llandaff, chairman; the Right Hon. J. W. Mellor, M.P., sir John Dorington, M.P., Sir G. B. Bruce, C.E., Major-General A. de Courcy Scott, R.E., Mr. A. de Bock Porter, C.B., Mr. H. W. Cripps, Q.C., and Mr. Robert Lewis. The right hon. gentleman added that he hopes to bring in the promised Bill dealing with the water question as soon as he sees any prospect of making progress with it.—Mr. Broadhurst asked Mr. Chaplin whether he would consider the desirability of taking such action as might be necessary to prevent any one local authority monopolising the sources of water-supply from the great watershed of the country in order to ensure equal opportunity for all communities to avail themselves of a share in this great and natural necessity of the people.—Mr. Chaplin said he was not aware that any local authority was seeking to monopolise the sources of water-supply from the great watershed of the country, nor was he quite clear as to what watershed it was that the hon. Member referred to; but such a scheme as that suggested would require express Parliamentary powers, and he had no doubt that Parliament would give any such scheme very careful consideration before assenting to it, and would have due regard to the interests of communities other than those of the authority by whom it was proposed that the water-supply should be appropriated.

Mr. Woods asked Mr. Chaplin, in view of his promise to introduce a measure this session for the purpose of strengthening and improving the position of the water consumers of the metropolis, whether he was aware that the East London Waterworks Company had introduced a

new condition in their latest demand notes—viz., that it will be unlawful to use water in the future for garden use except through meters; whether in his promised measure he would make provision protecting the consumers against this prohibition of the use of water in gardens; and if he was aware that the company in question had admitted that no reliable water meter had yet been invented.—Mr. Chaplin said he was informed by the company that, owing to the excessive use and waste of water by reason of garden hose and other apparatus being employed and frequently left running day and night, the directors had given notice for determining the arrangements entered into for garden supply. The fixed charge had been abolished, and the supply for garden purposes would be furnished through meters. He must defer any statement as to the provisions of the proposed measure until it was introduced by him. As regards the last question, the company stated that they were not aware that they had ever "admitted that no reliable meter has yet been invented." They also stated that it was physically impossible for more water to be registered than passed through the meter, although it might happen that the whole of the water passing through the meter was not registered.

FRIDAY, APRIL 30TH.

Vaccination Commission.

Mr. T. W. Russell, in reply to a question addressed to him by General Laurie, said he was informed that the appendices to the report of the Royal Commission on Vaccination were now in the printer's hands, and would be issued as soon as the lithographs accompanying them were ready.

Salt for the Navy.

Sir Charles Cameron asked the First Lord of the Admiralty whether it was the case that salt was not included among the condiments issued by the Admiralty for use on board ship; and whether, considering the importance of salt as a dietetic ingredient, and the fact that the use of salt meat as the principal form of food on board ship had long been superseded, he would consider the propriety of issuing salt as well as mustard and pepper for use on board Her Majesty's ships.—Mr. Macartney, Financial Secretary to the Admiralty, replying to the question, said that salt had hitherto been issued as a ration only in the case of boys in training ships and troops on passage where the "savings" system did not exist. His attention was only drawn to this after the Estimates for the current year were framed, but arrangements were now being made which would meet the views expressed in the hon. Member's question.

Plague on Board Ship.

Sir Walter Foster asked the President of the Local Government Board whether the Indian transport, *Dilwara*, which arrived at Southampton on April 6th, had had a fatal case of plague on board during her voyage; whether the local authorities found their sanitary powers sufficient to protect the local health interests; and whether this was the second occasion within the last few months on which the infection of plague on board ship had been successfully dealt with in this country without any resort to quarantine detention of vessels and persons.—Mr. T. W. Russell, replying for Mr. Chaplin, said that a fatal case of plague occurred on board the Indian transport, *Dilwara*, after the vessel had left Bombay. The body was buried at sea, and under the recent Venice Convention only the two actual attendants on the sick person were detained at Suez (Moses' Wells), the vessel at once passing through the canal in quarantine. On reaching Southampton on April 6th the *Dilwara* was met by a medical inspector of the Board, who acted in concert with the military and local port authorities. No further case had occurred, and under the excellent arrangements organised by the port medical officer all the 1235 persons on board were allowed to land, and the existing powers were found to be fully sufficient to protect all health interests concerned. The hon. Member was quite correct in his assumption; this was the second occasion within the last few months on which the infection of plague on board ships had been successfully dealt with without resort to any quarantine detention of either vessels or persons.

Overcrowding on Railways.

Mr. Ritchie, President of the Board of Trade, said, in reply to Mr. Weir, that he saw no reason to appoint a committee to inquire into the means to be adopted to prevent the overcrowding of railway carriages.—Mr. Weir thereupon intimated that he would call attention to the matter on the Estimates.

MONDAY, MAY 3RD.

The Stamping Out of Rabies.

Mr. Walter Long, President of the Board of Agriculture, replying to a question by Mr. Lough, said it was not proposed to apply muzzling orders to the whole country, but only to areas in which rabies undoubtedly existed or to which there was reasonable fear that it might have been conveyed. A series of orders for this purpose would be issued in the course of the next few days. No particular pattern of wire muzzle was compulsory, but with a view to assist dog-owners in the selection of a muzzle specimens of a muzzle which the Board believed to be both efficient and humane would be deposited at the principal police stations in districts to which muzzling orders were applied. An order regulating the importation of dogs would be issued almost immediately. It would be premature for him to forecast the time during which it would be necessary for muzzling orders to be kept in force. Rabies was, unfortunately, a disease which might be dormant for a considerable period after an animal had been bitten, and much would depend upon the support the Board received from local authorities and dog-owners generally in their efforts to stamp out the disease in this country.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.

Traité de Chirurgie Clinique et Opératoire. Von A. le Dentu et P. Delbet. Tome quatrième. 1897.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

Atlas of Human Histology. By Dr. Arnold Brass, Gottingen. Authorised translation from the German, with additions, by R. A. Young, M.D., B.Sc., London. Illustrated. 1897. Price 31s. 6d. net.

BLACK, A. AND C., Soho-square, London.

Fads of an Old Physician: a Sequel to "Plea for a Simpler Life." By G. S. Keith, M.D., LL.D., F.R.C.P. Edin. 1897. Price 2s. 6d.

BLAKISTON, P., SON AND CO., Philadelphia.

A Clinical, Pathological, and Experimental Study of Fracture of the Lower End of the Radius. By J. B. Roberts, A.M., M.D. Illustrated. 1897.

CHURCHILL, J. & A., Great Marlborough-street, London.

Materia Medica, Pharmacy, Pharmacology, and Therapeutics. By W. H. White, M.D., F.R.C.P. Second edition. 1897. Price 7s. 6d.

Antiseptic Principles for Nurses. By C. E. Richmond, F.R.C.S. 1897. Price 1s.

CLARK, T. AND T., George-street, Edinburgh.

The Procedure in Accident Inquiries and Investigations according to the Law of Scotland. By Henry H. Brown. 1897. Price 7s. 6d.

CONSTABLE, T. AND A., Edinburgh.

Atlas of Clinical Medicine. By Byrom Bramwell, M.D., F.R.C.P., F.R.S. Edin. Vols. I., II., and III.

CROSBY, LOCKWOOD, AND SON, Stationers' Hall-court, Ludgate-hill, London.

Plumbing, with supplementary chapters upon House Drainage. By W. P. Buchan, R.P. Seventh edition. Illustrated. 1897. Price 3s. 6d.

GOVERNMENT PRINTING OFFICE, Washington.

Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States for the Fiscal Year 1896.

KEENER, W. T., Co., Chicago, Ill.

Lectures on the Treatment of Fibroid Tumours of the Uterus, Medical, Electrical, and Surgical. By F. H. Martin, M.D. 1897.

LEA BROTHERS AND CO., Philadelphia and New York.

Clinical Lessons on Nervous Diseases. By S. Weir Mitchell, M.D., LL.D. Edin. 1897.

LEHMANN, J. F., Munchen.

Lehmann's Medicin-Handatlanten. Band 15. Interne Medicin. Von Dr. C. Jakob. 1897.

Lehmann's Medicin-Handatlanten. Band 1. Von Dr. O. Schaeffer. 1897.

LEWIS, H. K., Gower-street, London.

Aphasia and the Cerebral Speech Mechanism. By Wm. Elder, M.D., F.R.C.P. Edin. Illustrated. 1897. Price 10s. 6d.

The Disorders of Digestion in Infancy and Childhood. By W. S. Fenwick, M.D., B.S. Lond. Illustrated. 1897. Price 10s. 6d.

A Treatise on the Medical and Surgical Diseases of Infancy and Childhood. By J. Lewis Smith, M.D. Eighth edition. Illustrated. 1897. Price 21s.

Influenza, with special reference to some Peculiar Symptoms. By William Gray, M.D. Edin. 1897. Price 3s. 6d.

LONGMANS, GREEN, AND CO., Paternoster-row, London.

History of Intellectual Development, on the Lines of Modern Evolution. By J. Beattie Crozier. Vol. I. 1897.

MASSON ET CIE, Paris.

Revue de Gynécologie. Tome i., No. 2, Mars—Avril, 1897.

PENTLAND, YOUNG J., Edinburgh and London.

Diseases of the Liver, Gall Bladder, and Biliary System: their Pathology, Diagnosis, and Surgical Treatment. By H. J. Waring, M.S., B.Sc. Lond., F.R.C.S. 1897.

SMITH, ELDER, AND CO., Waterloo-place, London.

A Course of Practical Histology. By E. A. Schäfer, LL.D., F.R.S. Second edition. 1897. Price 7s. 6d.

SPRINGER, JULIUS, Berlin.

Schmerzlose Operationen. Von Dr. C. L. Schleich. 1897.

THE REBMAN PUBLISHING CO., Adam-street, Strand, London.

The American Year-book of Medicine and Surgery. Edited by G. W. Gould, M.D. Illustrated. 1897. Price 38s.

WATTS AND CO., Johnson's-court, Fleet-street, London, E.C.

A Plea for the Unborn. By Henry Smith. 1897.

Leans Royal Navy List, April, 1897 (Witherby and Co., High Holborn, London; price 7s. 6d.).—Revue des Sciences Medicales en France et a l'Étranger; No. 98, 15th Avril, 1897 (Masson et Cie, Paris).—A Plea for the Canine Race: On Hydrophobia and Distemper Madness; by the Editor of "Health News" (The Savoy Press, 115, Strand, London, W.C; price 1d.).—The Municipal Year Book for 1897 (published at the offices of "London," 125, Fleet-street, London; price 2s.).—The Ophthalmic Review, March, 1897 (J. and A. Churchill, London; price 1s.).—Institutional Buildings Completed or Commenced during the Diamond Jubilee of Queen Victoria; by Passmore Edwards, 1897 (Jas. Akerman, printer, London, W.C.).—The Cyclist's Pocket-book and useful Memoranda, 1897 (H. W. Peabody and Co., 5, East India-avenue, London, E.C.).—The Quarterly Journal of Microscopical Science, April, 1897 (J. and A. Churchill, Great Marlborough-street, London; price 10s.).—Journal of the American Public Health Association; April, 1897 (published quarterly by the American Public Health Association Concord, N.H.).—Magazines, &c., for May: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowledge, and Humanitarian.—The South African Medical Directory for 1897 (Cape Times Printing Works, St. George's-street, Cape Town).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, JAMES, M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health by the Barnes Urban District Council.

BENNET, M.R.C.S., L.R.C.P., has been appointed Resident House Surgeon to the Lock Hospital and Assistant House Surgeon to the Throat and Ear and Eye Departments of the Royal Infirmary, Liverpool.

BUTLER, G. H., L.R.C.P. Irel., L.R.C.S. Edin., has been re-appointed Medical Officer of Health by the Wealdstone Urban District Council.

CASTLE, R. F., M.B., B.S. Camb., M.R.C.S., has been re-appointed Medical Officer of Health for the Darfield Urban Sanitary District.

COOMBS, M. L. B., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Newport (Isle of Wight) Borough.

COUNCELL, R. W., M.R.C.S., has been appointed Medical Officer for the Sixth Sanitary District of the St. Saviour's Union, London.

COWPER, J., M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Shanklin Urban District Council.

COX, R. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Teme Rural District Council.

CRAWFURD, R. H. P., M.D. Oxon., M.R.C.P. Lond., has been appointed Pathologist to the Royal Free Hospital.

DAVIES, J. EDGAR P., M.B., B.Sc. Lond., M.R.C.S. Eng., L.R.C.P., has been appointed Medical Officer to the South Wales Steel and Tin-plate Works, Llanelly, vice J. A. Jones.

DE'ATH, G. H., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Buckingham Town Council.

DE CLIVE-LOWE, G. T. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for Hokiangu, New Zealand.

DOCHARD, A. T., M.B., C.M. Edin., has been re-appointed Medical Officer of Health for the Whitefield Urban Sanitary District.

DODD, E. J. A., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the General Infirmary, Leeds.

EVERS, CHAS. J., M.D. Durh., M.R.C.S., has been re-appointed Medical Officer of Health by the Faversham Town Council.

FAGGE, C. H., M.R.C.S., L.R.C.P., has been appointed Surgical Registrar and Tutor to Guy's Hospital.

FAWCETT, JOHN, M.D., B.S., M.R.C.S. Lond., F.R.C.S. Eng., has been appointed Assistant Physician to the Royal Free Hospital.

FENTEM, P. S., M.D. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Baston and Burneli Urban District Council.

FERGUSON, JAS. M., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Third Sanitary District of Burnley Union.

FISHER, J. B., M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Whitehaven Rural District Council.

FORSYTH, ROBERT, M.D. Glasg., C.M., has been re-appointed Medical Officer of Health by the Drighlington Urban District Council.

FRANEY, A. B., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health by the Hadleigh Urban District Council.

GROOM, H., M.D. Camb., M.R.C.S., has been appointed Medical Officer for the first, second, A, and eighth sanitary districts of the Wisbech Union, vice W. Groom, resigned.

GOODFELLOW, JAS. A., M.B., C.M. Glasg., has been re-appointed Medical Officer of Health by the Brampton and Walton Urban District Council.

HADOW, G. E., L.R.C.P. Lond., M.R.C.S., has been appointed a House Surgeon to the Swansea Hospital.

HARPER, H. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Stowmarket Urban District Council.

HARRIS, S. C., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Ely Urban District Council.

HARRISON, JAMES, M.R.C.S. Eng., L.R.C.P. Edin., has been appointed Medical Officer to the East Grinstead General Dispensary, vice John Magrath, deceased.

HARTLEY, J. V., M.R.C.S., L.R.C.P., has been appointed Medical Officer at Ida Hospital, Leeds.

HAY, JOHN, M.B., Ch.B. Viet., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician to the Royal Infirmary, Liverpool.

HODGES, A. E., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the First Sanitary District of the Burnley Union.

HOFFMEISTER, H. E., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the East Cowes Urban District Council.

JEFFERY, H. F., M.B., Ch.B. Viet., has been appointed Senior House Surgeon to the Bury Infirmary.

JOHNSTONE, G. W., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Upholland District Council.

LAWSON, GARNET G., M.B., Ch.B. Viet., has been appointed Resident House Physician to the Royal Infirmary, Liverpool.

LOWNDS, JAS. R., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health by the Brixworth Rural District Council.

LUMB, E. J., M.R.C.S., L.R.C.P., has been appointed House Physician to the General Infirmary, Leeds.

MACDONALD, J. S., L.R.C.S., L.R.C.P. Edin., has been appointed Resident House Physician to the Royal Infirmary, Liverpool.

MARSHALL, F. E., M.B., Ch.B. Viet., L.S.A., has been appointed Resident House Surgeon to the Royal Infirmary, Liverpool.

MARTIN, A. A., M.B., B.S. Lond., M.R.C.S., L.R.C.P., M.P.C., has been appointed House Physician to St. Mary's Hospital, London, vice Cheadle.

MARTIN, FRED. W., L.R.C.P., L.R.C.S. Edin., M.R.C.S., has been appointed Medical Officer by Brighouse Town Council.

METCALFE, R., M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health by the Leyburn Rural District Council.

MONSARRAT, K. W., M.B., C.M. Edin., has been appointed Assistant Surgeon to the Hospital for Cancer and Skin Diseases, Liverpool.

NUNN, P. W. G., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Bournemouth Town Council.

PRICE, ARTHUR, M.R.C.S., has been appointed Medical Officer of H. M. Prison, Liverpool, vice G. Beamish.

PROSSER, FRANK, M.B., C.M. Glasg., has been re-appointed Medical Officer of Health by the Rainford District Council.

RENNET, D., M.D. Aberd., D.P.H., has been appointed Medical Officer by the Burton Town Council.

RONALDSON, JAS. B., M.D. St. And., L.R.C.P., F.R.C.S. Edin., D.P.H., has been appointed Medical Officer of Health by the Dunbar Town Council.

SEATON, DOUGLAS, M.B., Ch.B., has been appointed Resident Surgical Officer to the General Infirmary, Leeds.

SILVER, HUGH, L.S.A., has been appointed Clinical Assistant to Out-patients at the Chelsea Hospital for Women, Fulham-road, S.W.

SIMPSON, HENRY, M.B., B.C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Market Weighton Second Sanitary District of the Pocklington Union.

SMITH, J. ECKERSLEY, M.B., Ch.B. Viet., has been appointed Resident House Surgeon to the Royal Infirmary, Liverpool.

SPRAKELING, R. J., M.R.C.S., has been re-appointed Medical Officer of Health by the Bootle Town Council.

TAYLOR, ALFRED SEYMOUR, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., and L.M., has been re-appointed Medical Officer of Health by the Tynemouth Rural District Council.

TAYLOR, F. E., M.A., B.Ch., M.B., has been appointed House Surgeon to the General Infirmary, Leeds.

TIPLADY, WM., L.R.C.P.; L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Tow Law Sanitary District of the Weardale Union.

WARD, ALBAN, M.B., C.M. Edin., has been appointed Medical Officer for the Codford St. Peter Sanitary District of the Warminster Union.

WATSON, A. E., M.B., C.M. Edin., has been appointed Medical Officer for the Wemyss Sanitary District.

WEBSTER, J. CLARENCE, M.D., F.R.C.P., F.R.S. Edin., late Senior Assistant to the Professor of Midwifery and Diseases of Women in the University, has been appointed Assistant Gynecologist to the Royal Victoria Hospital, Montreal.

WILLIAMS, R. P., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed House Physician to the Royal Free Hospital.

WILLIAMS, STANLEY W., M.R.C.S., L.R.C.P., has been appointed Resident House Surgeon to the Royal Infirmary, Liverpool.

WOODFORD, E. R., M.D. Aberd., M.R.C.S., has been re-appointed Medical Officer of Health by the Ventnor Urban District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BURY INFIRMARY, Lancashire.—Junior House Surgeon. Salary £60 per annum, with board, residence, and attendance.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Junior House Surgeon. Salary £50 per year, with board, apartments, and laundress.

CITY OF COVENTRY.—Medical Officer of Health for five years. Salary £500 per annum. Applications to the Town Clerk, Coventry.

COUNTY LUNATIC ASYLUM, Lancaster.—Assistant Medical Officer for five months. Salary at the rate of £100 per annum, with board, &c.

HARTISMERE UNION, Suffolk.—Medical Officers and Public Vaccinators for Botesdale District, Mendlesham District, and Wortham Separate School. Salary for the Botesdale district at the rate of £85 per annum, and for the Wendlesham district £70 per annum, exclusive of fees as are allowed under the consolidated orders of the Local Government Board. Salary for the School at Wortham, near Diss, at the rate of £20 per annum, with fees similar to those paid in the districts. Applications to the Clerk, Guardians' Office, Eye, Suffolk.

HARTLEPOOLS HOSPITAL, Hartlepool.—House Surgeon. Salary £80 per annum, with board, washing, and lodging in the institution.

HOSPITAL FOR WOMEN, Soho-square, London.—House Physician for six months. Salary for that period £30. Also Registrar for twelve months. Honorarium 25 guineas.

KESWICK URBAN DISTRICT COUNCIL.—Medical Officer of Health for the Urban District of Keswick. Salary £33 per annum. Applications to the Clerk, Council Offices, Keswick.

LIVERPOOL EYE AND EAR INFIRMARY.—House Surgeon. Salary £80, with residence and maintenance.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the Eastern Fever Hospital, the Grove, Homerton, N.E., unmarried. Salary £160 the first year, £180 the second year, and £200 the third and subsequent years of service, with board, lodging, attendance, and washing, subject to statutory deduction under the Poor-law Officers Superannuation Act, 1896. Applications to the Clerk to the Board, Norfolk-street, Strand, W.C.

NORFOLK COUNTY ASYLUM, Thorpe, near Norwich.—Junior Assistant Medical Officer, unmarried. Salary, £110 per annum, with £10 annual increase to £160, board (no liquors), lodging, and washing provided.

NOTTINGHAM GENERAL DISPENSARY.—Clinical Assistant for six months. Salary at the rate of £120 per annum, with rooms and attendance.

ROYAL EYE HOSPITAL, Southwark, or ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—House Surgeonship. Salary £50 per annum, with free board and lodging in the hospital.

VICTORIA HOSPITAL FOR SICK CHILDREN, Park-street, Hull.—Lady House Surgeon. Salary £50 per annum, with board and laundry.
WARNEFORD LUNATIC ASYLUM, Oxford.—Medical Superintendent and Secretary. Salary £500 a year, with furnished house, coals, gas, garden produce, milk, laundry, and keep for one horse.
WESTERN OPHTHALMIC HOSPITAL, 155, Marylebone-road, London, W.—Assistant Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

ATKINSON.—On May 1st, at Holloway-road, N., the wife of Robert Atkinson, M.R.C.S. Eng., of a son.
BLOOD.—On April 30th, at Devonshire-road, Birkenhead, the wife of Surgeon-Major Joseph Fitz-Gerald Blood, Bengal army (retired), of a son.
FOSTER.—On April 21st, at San Remo, Italy, the wife of Michael George Foster, M.D., of a son.
GABRIEL.—On May 1st, at Pembridge-villas, W., the wife of Wm. M. Gabriel, M.R.C.S., L.D.S. Eng., of a son.
HALLIWELL.—On April 27th, at Irwell, Winchcombe, Glos., the wife of John Halliwell, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.
HEARNDEN.—On April 29th, at Rose Cottage, Leatherhead, the wife of Walter C. Hearnden, M.R.C.S., of a daughter.
LEES.—On April 24th, at Somersham, Hunts, the wife of Charles Archibald Lees, M.R.C.S., L.R.C.P., of a daughter.
MOTT.—On May 4th, at Wimpole-street, Cavendish-square, W., the wife of Frederick W. Mott, M.D., F.R.S., of a daughter.
OPENSHAW.—On April 29th, at Wimpole-street, Cavendish-square, the wife of T. H. Openshaw, M.S., F.R.C.S. Eng., of a daughter.
QUILL.—On May 4th, at Fort Pitt House, Rochester, the wife of Brigade Surgeon-Colonel R. H. Quill, Army Medical Staff, of a son.
WAGGETT.—On May 4th, at 45, Upper Brook-street, the wife of Ernest Waggett, M.B., B.C. Camb., of a daughter.

MARRIAGES.

BELL—HASLEWOOD.—On April 28th, at the parish church, Oswaldtwistle, Fred Bell, F.R.C.S., second son of the late Dr. Bell, of Preston, to Maude Earl, eighth daughter of the Rev. Boulby Haslewood, Vicar of Oswaldtwistle.
BOULTON—HOLLAND.—On April 28th, at St. George's Church, Hanover-square, Percy Boulton, M.D., of Seymour-street, Portman-square, W., to Charlotte Frederica, widow of J. Harris Holland, Esq., late of Greville House, London.
DIACK—NUTTALL.—On April 29th, at Holy Trinity Church, Sloane-square, Patrick William Diack, M.A., M.B., C.M., to Jessie, only daughter of the late Dr. Francis Nuttall, of Bury, Lancashire.
FRANCIS—AGATE.—On April 30th, at Sydney, New South Wales, Henry Alexander Francis, of Sherwood, Brisbane, B.A., M.B., of St. John's College, Cambridge, to Lillian, youngest daughter of the late Joseph Agate, of Ashtead, Emsworth, Hants.
MACNAMARA—MAHONY.—On April 29th, at Ardfoil, co. Cork, Surgeon-Major W. J. Macnamara, Royal Hospital, Chelsea, to Lily, second daughter of the late Martin Francis Mahoney, Lotamore, co. Cork.
OSBORN—PARSONS.—On April 28th, at St. Bartholomew's Church, Dover, Francis Arthur Osborn, M.R.C.S. and L.R.C.P., youngest son of Ashby G. Osborn, M.R.C.S., L.S.A., to Hilda Venetia, eldest daughter of C. Parsons, M.D., Dover.
PATERSON—JUDD.—On May 3rd, at Cape Town, John Paterson, M.A., M.B., C.M., to Ethel Maud, third daughter of the late Henry Kelridge Judd, of Lyndhurst, Hornsey.
STERRY—ALLEN.—On the 29th ult., at St. Edward's Church, Leek, John Sterry, M.R.C.S., L.R.C.P., of Riverhead, Kent, to Beatrice, youngest daughter of William Allen, solicitor, Leek.
WALTER—COOK.—On April 28th, at the parish church, Shirley, Edwin Charles Walter, M.R.C.S. Eng., L.R.C.P. Lond., of Market-place, Wallingford, to Mary Ellen, only daughter of the late J. Cook, Esq., of Canning-road, Croydon.
WARKE—VAUGHAN.—On April 28th, at Christ Church, Linnet-lane, Liverpool, Charles Lyle Warke, L.R.C.P. Lond., M.R.C.S. Eng., of Upper Parliament-street, to Margaret Muriel Tilden, third daughter of James Vaughan, of St. John's, N.B., Canada.
WEARING—TOWNSEND.—On the 28th inst., at St. Mary's Church, Rawstenstall, by the Rev. J. Jolly, B.A., William Thomas Wearing, M.B., C.M. Edin., of the Beeches, Clapham, Yorkshire, second son of the late Richard Wearing, of Hipping Hall, Kirkby-Lonsdale, to Ada Louisa, third daughter of the late Joshua Townsend, of The Holme, Rawtenstall.

DEATHS.

CARTER.—On May 4th, at Belgrave-crescent, Scarborough, Henry Vandyke Carter, M.D. Lond., Deputy-Surgeon-General, I.M.S., Hon. Surgeon to the Queen, aged 65.
FERNANDEZ.—On May 4th, at Brookfield, Ross, Herefordshire, Thomas Francis Fernandez, M.D., F.R.C.S., in his 83rd year.
HUBERT.—On April 22nd, suddenly, at Billinghurst, Sussex, Edgar Hamilton, youngest son of William Henry and Sarah Isabel Hubert, aged 21.
PERKINS.—On May 2nd, at Snaith, East Yorks, Thomas Perkins, M.R.C.S., L.S.A.
RICHARDSON.—On May 2nd, at Rock Hall, Uckfield, of tetanus, following a bicycle accident, Adolphus Joseph Richardson, M.D. Cantab., M.R.C.P. Lond., &c., of 45, St. John's-terrace, West Brighton.
WHITE.—On April 21st, at Boscombe, Bournemouth, Robert Godfrey White, M.R.C.S.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (12th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (13th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (15th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (10th).—MEDICAL SOCIETY OF LONDON.—8 P.M. General Meeting for the Election of Officers and Council for Session 1897-98. 8.30 P.M. Ordinary Meeting. Dr. A. E. Garrod will open the Adjourned Discussion on Mr. W. Armstrong's paper on the Value of an Exclusively Red Meat Diet in certain Cases of Chronic Gout.—Mr. S. Edwards: On the Removal of High-lying Cancer of the Rectum by Kraske's Method, with a series of Fourteen Cases.

TUESDAY (11th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Dr. F. Warner: On the Relations between Bodily Development, Nutrition, and Brain Conditions in their Pathological Aspects.—Mr. H. H. Clutton: (1) Case of Subclavian Aneurysm successfully treated by Ligature; (2) Case of Pharyngeal Abscess, Hæmorrhage, Ligature of Carotid Arteries.

WEDNESDAY (12th).—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Dr. D. Grant will open a General Discussion on Turbinotomy as applied to the Inferior Turbinal.

THURSDAY (13th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Specimens:—Mr. Jessett: (1) Pan-hysterectomy; (2) Subperitoneal Hysterectomy; (3) Subperitoneal Hysterectomy for Myoma complicated by Pregnancy.—(4) Subperitoneal Hysterectomy for Myoma complicated by Double Pyosalpinx.—Dr. Macnaughton-Jones: Some Microscopic Sections of Rare Pathological Conditions. Papers: Dr. Snow: On the Value in Abdominal Malignant Disease of Exploratory Laparotomy *per se*.—Dr. R. T. Smith: Notes of a Case of Puerperal Septicæmia treated by the Antistreptococcus Serum.

HARVEIAN SOCIETY.—Dr. Cagney: Some Resources in the Diagnosis of Nervous Diseases.

FRIDAY (14th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Dr. F. Taylor: A Case of Chronic Hydrocephalus, Fatal at the age of Sixteen Years.—Mr. C. B. Lockwood: A Case of Wound of the Mesentery, with subsequent Gangrene of the Intestine.—Mr. H. Marsh: A Case of Free Incision and Evacuation of the Intestine in the course of an Operation for Strangulated Hernia.—Mr. L. A. Bidwell: Two Cases of Irreducible Femoral Hernia in which the Vermiform Appendix alone occupied the Sac.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (10th).—LONDON SCHOOL OF MEDICINE FOR WOMEN (30, Handel-street, Brunswick-square, W.C.).—6 P.M. Dr. P. Manson: Tropical Fevers.

TUESDAY (11th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—Dr. Beevor: Demonstration of Cases.

WEDNESDAY (12th).—LONDON SCHOOL OF MEDICINE FOR WOMEN (20, Handel-street, Brunswick-square, W.C.).—6 P.M. Dr. P. Manson: Dysentery.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Dunn: Ophthalmic Surgery during the Queen's Reign.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Arkle: Pleural Effusion.

THURSDAY (13th).—ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Liquid Air as an Agent of Research.

FRIDAY (14th).—EAST LONDON HOSPITAL FOR CHILDREN.—3 P.M. Dr. A. Chaplin: Chronic Pulmonary Induration.

ROYAL INSTITUTION.—9 P.M. Prof. H. Dixon: Explosion—Flames.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—Dr. Colman: General Symptomatology.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 6th, 1897.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
April	30	29·80	S.W.	56	52	98	59	47	0·20	Fine
May	1	29·86	N.W.	48	45	105	62	41		Cloudy
"	2	29·99	S.W.	56	48	108	63	43	0·02	Fine
"	3	29·88	N.W.	54	50	110	61	50	...	Cloudy
"	4	30·17	N.	49	44	103	63	41	0·15	Fine
"	5	29·90	S.W.	51	50	108	60	48	0·02	Raining
"	6	30·05	N.W.	48	43	96	52	40	...	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

TRICHOMONAS VAGINALIS.

Dr. N. S. DAVIS, of Chicago, describes a case in which the urine of a female patient was found on many occasions to contain moving amœboid bodies, mostly of oval shape. When in motion the forward end was generally narrowest, and from it projected several rapidly moving cilia. When dead these objects were occasionally oval but were more often round. They were clear and homogeneous in appearance, and might easily be mistaken for unusually clear, oval or round epithelial cells. They were found in large numbers in scrapings from the vagina, from the labia minora, and from the meatus urinarius; in these scrapings they retained life much longer than in the urine. They could be readily stained by aniline dyes, especially methyl-blue, and an oval nucleus could then be seen in many, but not in all. They had on an average about two-thirds the length of a squamous epithelial cell from the external genitals, but they were not so broad. The cilia were from one to one and a half times the length of the amœboid body. The patient suffered from nephritis and mild glycosuria; no symptoms were observed which could be ascribed to the trichomonas; the vulva was moist, clean, not reddened, and not in any way abnormal; the urine contained epithelial cells in unusual numbers.

M.R.C.S.—No final decision has been come to with respect to the reproduction of Lord Lister's portrait. Nothing can be done until the picture returns from the Royal Academy to the Royal College of Surgeons of England in August.

X. Y. Z.—We do not know whether the Red Cross Society needs any medical officers for Greece at the present time. Our correspondent might address the Greek Legation, 58, Scarsdale-villas, Kensington, W.

Mr. W. G. Earle is thanked for his communication.

"WANTED A HOME FOR AN IMBECILE BOY."

A CORRESPONDENT writes: "In reply to Mr. Barnley's query as to a training home for a boy of deficient mental condition, may I suggest that if certifiably imbecile he might be received at the Midland Counties' Idiot Asylum, Knowle, near Birmingham, on a moderate annual payment, the amount of which could be learned from the secretary, Mr. W. G. Blatch. If the mental deficiency be of but slight character, application might be made to Miss Paul, 27, Percy-street, London, W., secretary of the National Association for Promoting the Welfare of the Feeble-minded, which is about to start a home for boys."

F. W.—An occasional occurrence of the kind our correspondent mentions need give him no uneasiness whatever, and the step he is about to take is quite justifiable.

"DR. RENTOUL'S EXPENSES FUND."—SIXTH LIST.

To the Editors of THE LANCET.

SIRS,—I enclose the final list of subscriptions to the above fund. It will be seen that the net result falls short of the sum asked for (£109 18*s.* 5½*d.*) by about £5. I beg to thank the subscribers to the fund, especially those who by their helpful letters proved to me that Dr. Rentoul has at his back a considerable number of practitioners who are willing to work and give for the cause of professional reform. I wish also to thank Mr. Colin Campbell, of Saddleworth, Yorks, and Dr. J. L. Speirs, of Gateshead, who have examined my accounts and certify them to be correct. With thanks also to yourselves, who have enabled me to give publicity to this fund.

I am, Sirs, yours faithfully,

ALFRED COX, M.B. Durh., Hon. Sec. and Treasurer.

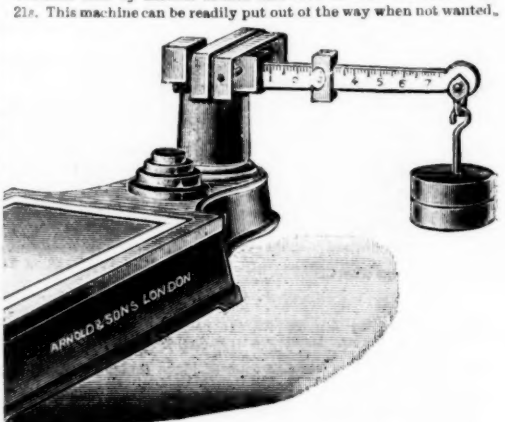
Gateshead, May 4th, 1897.

	£	*s.*	*d.*
J. Atkinson, Crewe	0	10	0
Morris Griffith Davies, Penygroes	0	5	0
L. A. B....	0	10	6
Gainsborough and District Medico-Ethical Society, per J. E. S. Passmore ...	1	1	0
J. E. S. Passmore	0	5	0
Total sum received and acknowledged	109	1	6
Expenses (printing, circulars, postage, &c.)	5	16	9
Net total	103	4	9

Nemo.—In such cases as that mentioned by our correspondent, where the pelvis is normal, any difficulty that may arise in the way of prolongation of the labour is more likely to be due to rigidity of the soft parts. Even if any drug could be relied upon to relax the pelvic articulations the possibility of rigidity of the soft parts would still remain. In many elderly primiparæ, however, the accoucheur is agreeably surprised to find that labour progresses favourably and that the patients' forebodings are not justified by the event.

THE "RELIANCE" PERSONAL WEIGHING MACHINE.

THE illustration shows a new and cheap form of personal weighing machine sold by Messrs. Arnold and Sons of West Smithfield for 21*s.* This machine can be readily put out of the way when not wanted,



as it can be placed under a chair or in a cupboard. Hitherto these personal weighing machines have taken up too much space in a consulting room and the expense has been too great. This machine weighs up to 24st., and being very light and portable can be used upon the floor or placed on a chair. It is very simple in construction and not likely to get out of order. The size of the platform is 10½ in. by 13½ in., with brass steelyard slide and weights. The whole machine is neatly japanned.

"MR. DAVENPORT AT PORTSMOUTH."

The above is the title of an article which has been sent to us by a correspondent, who says that it was cut from the *Portsmouth Times*, of May 1st. We think that our contemporary deals hardly by its readers in devoting space to the glorification of a quack; but the article contains passages which reveal so clearly the true nature of the man whom it purports to puff that the whole thing may be a piece of journalistic irony. "In the course of his (Mr. Davenport's) studies," it runs, "he devoted special attention to typhoid fever, and during the alarming illness of the Prince of Wales from that terrible disease in 1871, Mr. Davenport laid before the physicians in attendance on his Royal Highness suggestions and remedies for the distinguished patient's cure. The receipt of these was duly acknowledged in a letter forwarded from Sandringham, which our representative saw." It would have been more honest if "our representative" had pointed out to the readers of the *Portsmouth Times* what was certainly the case—that the formal act of acknowledgment of a communication does not imply any interest in the communication. All sorts of troublesome persons pestered the Prince's attendants with foolish suggestions at that time, but Mr. Davenport is, as far as we are aware, singular in attempting to make money out of the courtesy which preferred not to allow him, however meddlesome his act, to remain unanswered. In another place the article states that Mr. Davenport's "principal letters of thanks from patients are preserved in a large book which he carefully treasures. Among these are communications from and on behalf of such illustrious personages as Her Majesty the Queen, the Prince and Princess of Wales, the Empress Frederick of Germany, the Queen Regent of Holland, the Queen of Denmark, Prince and Princess Christian." Evidently Mr. Davenport has made to these royalties communications of some sort, to which unfortunate secretaries have given the usual formal replies, and Mr. Davenport now tries to humbug the public through the medium of the *Portsmouth Times* into believing that Her Majesty the Queen and the others have as patients sent him "letters of thanks." Having read so much of the article, we instinctively looked lower in the column to find the religious tag which such persons as Mr. Davenport very usually add to their manifestoes. And we found it, the representative of the *Portsmouth Times* having duly reported it. Mr. Davenport, we are informed, "claims that the power to cure various diseases is with him a gift—'A gift from God.' He was induced to go out curing the sick as he is now doing by hearing a sermon preached on the Parable of the Talents some years ago." Faugh!

T. J. W. should consult a solicitor on the actual wording of the agreement. We are not aware of any custom in the matter, but if a radius is to be dealt with it surely must be calculated as the crow flies from the nearest point of the respective premises.

WANTED A SURGICAL PHIDIAS:

To the Editors of THE LANCET.

SIRS,—I would be deeply indebted to you were you to give me the benefit of your advice on the following. I am particularly dissatisfied with my personal appearance and am seriously considering whether it would not be feasible to have some operation performed with regard to three points. Firstly, my nose at the tip is thick and round, instead of being constructed of planes; now, were the nostrils slit vertically at the end and joined closer together and a horizontal section taken out a great deal of the awkwardness would disappear; also, though young, my nose has in parts distended blood-vessels, giving a red appearance whenever I feel cold; now, would it not be practicable to cover it with skin from the arm or elsewhere? Secondly, my lips are unfortunately thick and clumsy; would it not be possible to take off a layer from the inside, even at the expense of their becoming rather shapeless? Lastly, my chin is very receding and rather dragged to one side; could not the introduction be effected of some extraneous living bone, say of the leg of a dog? A triangular piece of bone placed at each angle of the jaw would increase the length and breadth of the jaw, supposing sufficient room for operation could be procured by slitting the skin under the chin and pushing it up; the muscular tissue at the bottom of the tongue might be slit at intervals to allow it to adapt itself to the necessarily increased area. The bone might be held in place, till it grew together, by being wired, and a silver horse-shoe plate placed on the inside of the curve would be absorbed in the system eventually. What would be the probability of gangrene or similar disease? I will be deeply grateful if you will give me your genuine opinion on the above, and tell me of some one whom I might consult on such fantastic surgery when I come up to town in two or three weeks, and suggest the possible cost, as in addition to these disadvantages my complexion has always been an ugly, ashy-grey, sallow colour, such as I have never seen anywhere. I am quite ready to run a fair amount of risk to have these, as far as possible, obviated. Thanking you beforehand.

I am, Sirs, yours truly,
SWALLOW.

May 4th, 1896.

*** We make an exception to our usual rule of not publishing letters from patients in favour of our correspondent, who seeks the aid of what he truly denominates "fantastic surgery," because his letter appeals to our sense of humour.—ED. L.

DUTIES OF MEDICAL OFFICERS OF HEALTH.

J. A. R.—There is no book on the subject so far as we know; but in vol. ii. of "A Treatise on Hygiene and Public Health," edited by Stevenson and Murphy, and published by Messrs. J. and A. Churchill, our correspondent will find an article by Dr. Alfred Ashby giving the information he requires. "Difficulties under the Notification Act," published at the office of THE LANCET, price 6*d.*, will also be found useful.

Clerk.—It is impossible to decide positively either for or against a miscarriage having occurred at two months if no product of conception, recognisable either by the naked eye or the microscope, can be found. As regards probability, if the patient was perfectly regular before and then missed two months pregnancy would naturally be thought of. On the other hand, a woman aged forty-four years may easily miss two months and then have a severe hæmorrhage with clots, some of which may temporarily lodge in the uterus owing to the approach of the menopause.

Mr. F. J. Boehm.—We are unable to review the work mentioned, but any preparations sent for analytical report will receive attention.

W. N. H.—We never recommend individual practitioners. Our correspondent must consult his own medical man.

TRAINING OF A MALE NURSE.

To the Editors of THE LANCET.

SIRS,—Could you or any of your readers oblige me by informing me of any hospital where a suitable lad could be trained as a sick attendant?

I am, Sirs, yours faithfully,
A. W. LEMARCHAND, L.R.C.P. Lond., M.R.C.S. Eng.

Barnstaple, May 5th, 1897.

Mr. Pugin Thornton's surmise is quite incorrect. We have tested the salt carefully, with absolutely negative results as to the presence of iodine.

NECROPSY, AUTOPSY, OR NECROTOMY.

A WRITER in the *Journal of the American Medical Association* is of opinion that the words "autopsy" and "necropsy" do not sufficiently define a post-mortem examination, for he says that the former simply means "seeing for one's self," and the latter need not imply more than a superficial inspection. He therefore suggests the word "necrotomy" as being preferable.

M.B., C.M.—The medical gentleman's name does not appear in the current 1897 Register. He died in 1896.

Mr. Brindley James.—One of the books has already been reviewed in our columns and the other has not been submitted to us.

H. W. T. (Bath).—We never recommend individual practitioners. Our correspondent must consult his own medical man.

Leeds Student should consult a medical man.

ERRATA.—In the pass-list of the University of Edinburgh which appeared in THE LANCET of May 1st, the name in the list of those passing the Second Professional Examination (old regulations) printed as "E. B. Anderson" should have been *E. B. Anderton*.—In the report of the Hunterian Society supplied to us, and published in our issue of April 24th, the remarks attributed to Dr. Butler Harris gave a false impression. Dr. Harris really said that ozone used in an inhalation of more than 10 per cent. strength would be too irritating in pneumonia, but might be useful in phthisis and bronchiectasis.

During the week marked copies of the following newspapers have been received:—*Todmorden News, Huddersfield Chronicle, Chatham News, Cambs Times, Banffshire Advertiser, Durham Advertiser, North Devon Herald, Cheltenham Examiner, Newcastle Journal, Loughborough Monitor, Wolverhampton Chronicle, Times of India, Pioneer Mail, Worcestershire Advertiser, Boston Herald, Yorkshire Post, Dudley Herald, Herts Reporter, Rochester Journal, Leicester Post, Bristol Mercury, Scotsman, Ripley News, Lowestoft Standard, Maryport News, South-Eastern Gazette, Builder, Liverpool Daily Post, Tonbridge Telegraph, Bournemouth Directory, Kendal Mercury, Leeds Mercury, Newport Advertiser, Birmingham Gazette, Architect, Manchester Courier, Salisbury Times, Ilfracombe Gazette, Sheffield Telegraph, Bradford Observer, East Anglian Daily Times, Isle of Wight Observer, Hampshire Post, Royal Cornwall Gazette, Brighton Gazette, Richmond and Twickenham Times, Radnor County Times, Reading Mercury, Local Government Chronicle, City Press, Hertfordshire Mercury, Mining Journal, Weekly Free Press and Aberdeen Herald, Sanitary Record, Weekly Times and Echo, Glasgow Evening News, Public Health, Surrey Advertiser, General Advertiser (Dublin), Glasgow Herald, Local Government Journal, Derbyshire Times, Australasian Medical Gazette, Taunton Echo, Drogheda Advertiser, Kidderminster Shuttle, Kidderminster Sun, The World, Le Gaulois (Paris), Kelso Mail, Echo, West Middlesex Herald, Ossett Observer, Mirfield Herald, Keble's Margate and Ramsgate Gazette, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Mr. E. B. Anderton, Ormskirk; Mons. A. Alberti, Paris; Messrs. Armour and Co., Lond.; Mons. J. Astier, Paris; Rev. A. Aitkens, Stowupland; Mr. G. Amy, Nice; Messrs. Arnold and Sons, Lond.

B.—Mr. R. A. Bayliss, Lond.; Mr. G. C. Barker, Brighton; Mrs. S. A. Bennett, Lond.; Mr. C. Birchall, Liverpool; Mr. R. S. Betts, Bournemouth; Messrs. Blondeau et Cie, Lond.; Messrs. Burroughs and Wellcome, Lond.; Mr. F. Bagger, Lond.; Messrs. J. Bell and Son, Nottingham; Bury Dispensary Hosp., Sec. of; Mr. N. Bradley, Manchester; Dr. W. T. Brendon, Plymouth; Dr. F. Lucas Benham, Lond.; Messrs. Brand and Co., Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mr. J. Bedford, Kegworth; Dr. H. A. Norwich.

C.—Mr. J. A. Corah, Lond.; Cookery and Food Exhibition, Lond., Hon. Sec. of; Messrs. Cooper, Corah, and Sons, Leicester; Chesterfield Hosp., Sec. of; Messrs. Cassell and Co., Lond.; Cellular Clothing Co., Lond.; Mr. W. Clay, Edin., *Canada Lancet*, Toronto, Manager of; Cycling Surgeon, Lond.

D.—Dr. J. H. Dauber, Lond.; Dr. D. Drummond, Newcastle-on-Tyne; Dalu-Kola Tea Co., Lond., Sec. of; Messrs. Down Bros., Lond.; Messrs. Duncan, Flockhart and Co., Edin.; Messrs. Davies and Co., Lond.; Mr. F. Davidson, Lond.; Dr. T. Orme Dudfield, Lond.; Mr. J. C. Daniel, Hanley.

E.—Mr. H. H. Ellis, Lelant, Cornwall; Exposition Internationale d'Arcachon, Arcachon-les-Bains, France; Messrs. W. W. Erwood and Co., Lond.; Messrs. Evans, Lescher, and Webb, Lond.; Dr. F. P. Elliott, Walthamstow; Messrs. A. and C. Emanuel, Lond.

F.—Messrs. Ferris and Co., Bristol; "Fulcrum" Cycle Co., Lond.

G.—Mr. F. G. Gardner, Warwick; Messrs. Gibbs, Cuxson, and Co., Wednesbury; Messrs. R. W. Greeff and Co., Lond.; Gresham Life Assurance Society, Lond., General Manager of; Dr. Groedel, Nauheim; Grafton Galleries, Lond., Directors of; Dr. A. Giles, Lond.

H.—Mr. C. Higgens, Lond.; Prof. F. Hobday, Lond.; Hunterian Society, Lond., Hon. Sec. of; Humanitarian League, Lond., Chairman of; Mrs. Hadfield, Shankhill; Mr. J. Heywood, Manchester; Mr. W. Hay, Hull; Mr. A. Haviland, Douglas, Isle of Man; Hartlepool Hosp., Hartlepool.

I.—Messrs. Ingram and Royle, Lond.; Messrs. Irving, Son, and Jones, Lond.; Imperial Granum Co., New Haven, U.S.A.

J.—Dr. Jaeger's Sanitary Woollen System Co., Lond., Managing Director of; Mr. J. B. Jones, Lond.

K.—Mr. G. Kelly, Lond.

L.—Dr. J. Fletcher Little, Lond.; Messrs. Longmans, Green, and Co., Lond.; Mr. A. S. Linton, Penzance; Mr. H. Lloyd, St. Asaph; Mr. A. W. Lemarchand, Barnstaple; Locum Tenens, Doncaster; London Vegetarian Society, Sec. of.

M.—Dr. R. Moir, St. Andrews; Male Nurses' Temperance Co-operation, Lond., Sec. of; Messrs. Macmillan & Co., Lond.; Medicus, Wrexham; M.B., C.M., Carluke; Malo, Lond.; Mr. H. D. Metcalfe, Bradford; Medical Supply Association, Edin.; Dr. F. D. Miller, Basingstoke; Mr. E. Merck, Lond.; Dr. C. Martin, Birmingham; Surg.-Maj. Money-Shewan, Bijnor, N.W.P., India; Messrs. C. Mitchell and Co., Lond.; Mr. B. May, Birmingham; Medical Society of London, Hon. Sec. of.

N.—Mr. H. G. Norrington, Leamington Spa; National Society for the Employment of Epileptics, Lond., Sec. of; Mr. A. Neve, Srinagar, Cashmere, India; Dr. R. Newman, New York; Mr. G. C. Nuttall, Leicester; *New Moon*, Crichton, N.B., Editor of; Norfolk County Asylum, Thorpe, Med. Supt. of; Newcastle-on-Tyne Hospital for Sick Children.

O.—Messrs. Oppenheimer, Son, and Co., Lond.

P.—Dr. A. G. Paterson, Ascot; Dr. G. J. Palen, Berlin; Mr. Y. J. Pentland, Edin.; Dr. Paschkis, Wien; Mr. W. C. C. Pakes, Lond.; Mr. J. Parnell, Lond.; Plymouth Medical Society, Hon. Sec. of; Mr. E. Parker, Lond.

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